THE

Journal of the American Medical Association

EDITED FOR THE ASSOCIATION BY N. S. DAVIS.

PUBLISHED WEEKLY.

Vol. X. CHICAGO, MARCH 31, 1888. No. 13.

ORIGINAL ARTICLES.

METHODS OF EXAMINATION OF BACTERIA FOR LABORATORY PURPOSES,

Based upon Notes taken in Prof. Koch's Laboratory in Berlin.

BY S. N. NELSON, M.D,

OF BOSTON, MASS.

FUNGI.

Bacteria are a species of fungi coming under the division of the fission fungi: besides the fission there are two other varieties, the mould and budding fungi.

The mould fungi are divided into Penecilium, Aspergillus and Mucor, being distinguished by the difference in growth of the seed stalk. The base or substratum of all is a mass of anastomosing threads, extending in every direction, forming a mycelium: from this extends the seed stalk.

Penecilium: The seed stalk extends upward like a pencil. It has no male or female members. The oldest spore is always the terminal one, being pushed out by the younger members. The distinguishing characteristic is that the spores grow on branches.

Aspergillus: When the spores of penecilium are joined together closely it forms the second variety—aspergillus—the spores here growing in masses on a head.

Mucor: Here the spores are enclosed in a capsule, which has a brown or yellow color. If the capsule is shaken it bursts and the spores fall out The characteristic of this variety is that the spores grow in a head or capsule.

2. Budding fungus: This is the fungus of fermentation, although all do not cause it. It has no mycelium or spore formation, but consists of ovid cells with budding processes. The spaces seen in the cells are fat cells and vacuoles.

There is a transition form between the mould and budding fungi—the "oidium." This is the fungus of Favus, and is pathogenic of this disease. Morphologically it resembles the budding fungi, having cells and buds, but it grows as a mycelium, a number of longish cells lying on one another.

3. Fission fungi: These are all true spirochæte, or bacteria—the latter being a general name for the whole class. Like the other fungi, they belong to the vegetable kingdom, and increase by the division of the cell and subsequent separation of the parts. They are different also from the budding fungi, in that the cells are immeasurably smaller.

The most elementary form is the coccus, having a bullet shape, all axes being alike. When lying with no regular arrangement they are simply spoken of as micrococcus; if they occur in pairs they are called diplococci, as that of gonorrhœa; if they are found four together, they may or may not be enclosed in a capsule, they are called tetracoccus; if found in the shape of a cube, four on each face, they are termed sarcinæ; if they occur in strings or chains, they are spoken of as streptococcus, as of erysipelas, and if in bunches, like grapes, staphylococcus. The substance binding the cocci together is called the zooglea. The spore formation of cocci has not yet been studied up; fat globules may be mistaken for spores.

The bacilli are rod like forms with a difference in the two dimensions. A characteristic element is their development. One way is by fission. A line is noticed in the middle of the cell, forming a constriction, and finally the two sections fall apart forming two plants. The other way is by spore formation, to be spoken of further on. These bacilli form strings, being joined end to end, and it often happens that we cannot distinguish the different members of the long threads. These threads may run in straight lines or breed upon themselves in any direction. There are many varieties of bacilli; some resemble cocci, but among them will always be found enough rods to fix the variety. This is especially noticed during rapid growth. When the growth is slow one dimension is always longer than the other.

The Spirillium, or third variety of bacteria, is characterized by being curved on its long axis, in different combinations. There is the plain curve or breed, as seen in the comma bacillus of cholera; the true spiral form, more or less resembling a screw, as that of relapsing fever, called an elementary form; and finally a complex form, where the spiral is bent upon itself in different directions. Spore formation in this variety of bacteria is not well known.

Many bacilli have cilia at the ends which in many cases are hard to distinguish. These cilia are the motile organs.

Examination of the Mould and Budding Fungi.—A small bit of the fungus is placed in alcohol, to which a drop or two of ammonia has been added, until it sinks. It is then placed in glycerine and can be easily torn apart and examined under the microscope.

Colors and Staining.—The difference of refraction between an object and the air makes a colorless object visible. When the medium approaches the refractive powers of the object then the object cannot be seen, as is shown when a glass rod is placed in oil of cedar. The experiment is best shown when a row of dishes is taken, the first being empty, the other dishes being filled respectively with water, oil of cedar, and Canada balsam. If now a glass rod or a lot of glass beads is placed in each of these successively it will be seen to grow less and less perceptible to the sight. With a colorless rod we simply get a structure picture, while with a colored rod we have in addition, the color.

Following out the principles here involved we make use of the following stains or dyes to render the bacteria more visible.

Methyl violet or gentian violet: This acts quickly and deeply, but may overstain.

Fuchsin: A red stain, not acting as quickly as gentian violet, but not as likely to overstain.

Methyl blue: This shows the finer structures and does not overstain.

Bismark brown, used mostly for contrast staining: Heat is not needed with this dye and it acts well in water and glycerine.

To prepare the staining solutions: First make a concentrated alcoholic solution, using absolute alcohol; then to some of this alcoholic solution add distilled water until the resulting solution is no longer transparent; generally about six parts of water are needed to one part of the alcoholic solution; filter, and the solution is ready for use. Bismarck brown cannot be used in alcoholic solution, a concentrated watery solution must be made.

Cover-glass Preparations.—A platinum needle must be held in the flame of a Bunsen burner or alcohol lamp, in order that it may be thoroughly sterilized, and after it has cooled we remove with it a small quantity of the material to be examined and make as thin a layer as possible on a carefully cleaned cover-glass—the less material used the better. If a second cover-glass is rubbed on the first the layer will be made thinner. The specimens are then to be dried in the air, under cover, and when dry are to be drawn three times through the flame, with the surface containing the specimen uppermost. This serves to coagulate the albumen and thus to fix the bacteria. Care must be taken not to overheat the specimen. They are then ready for the staining, which may be done by dropping some of the watery solution of the stain upon the preparation and allowing it to stand, perhaps using a little heat, or by allowing the specimen to float, specimen side downward, in a dish containing the staining solution—from one to twenty minutes may be required. The preparations are washed in distilled water and if overstained, decolorized. For this purpose alcohol, acetic or the mineral acids are used, generally water and alcohol are sufficient. The clean surface of the cover-glass is then dried and the specimen ready to examine. It may be laid on a slide with a drop of distilled water and then examined with an oil immersion lens. If it is desired to keep the preparation, the specimen is allowed to dry by allowing the water on the specimen to evaporate, and by means of Canada balsam the cover-glass may be fixed on the slide.

Cultivation of Bacteria.—All utensils to be used are to be first thoroughly sterilized. Test tubes are to be first thoroughly washed and dried; they are then closed up with plugs of cotton wool, so made that they may be easily removed when necessary. The tubes are then to be sterilized under a dry heat, under a temperature of 150° C.,—302° F.—twenty minutes will be long enough. The heating is generally sufficient when the cotton plugs are slightly tinged yellow. They are then allowed to cool and are ready for use. We have found that this could be done in the oven of a kitchen stove or range. In the same way flasks and other utensils may be made sterile.

Peptone Gelatine.—Take a pound of fresh, lean meat, containing little or no fat, mince it finely, add a little water and allow the mixture to stand over night. The following day the liquid is thoroughly strained and pressed from the meat, water being added to bring the amount up to a litre. Then the following is added:

Peptone sicca,.....	10 grams.
Common salt,.....	5 "
Gelatine,.....	100 "

[Instead of the above 10 grams of Liebig's extract may be used with a litre of water.]

The mixture is then allowed to stand in a flask a quarter of an hour, or until the gelatine is thoroughly softened. Flask is then placed on a water bath and heated to 60° C.—140° F.—until the gelatine is entirely dissolved. At the temperature above named coagulation of albumen does not occur. Next add a solution of sodio-carbonate with a pipette till a test shows no acid reaction, and the solution is neutral or perhaps slightly alkaline, many bacteria preferring an alkaline medium; then lightly plug up the neck of the flask with cotton and heat for an hour in a steam kettle at a temperature of 100° C.—212°F. Being heated and sterilized in constantly rising steam is much better than ordinary boiling, as we can obtain a higher temperature, while in common boiling cold air comes in contact with the flask, thus lowering the temperature. Next test a little of the liquid by filtering. If the filtrate is still cloudy, boil longer; if it is clear, test to see if it still remains alkaline. If not, add more of the sodic carbonate solution and repeat the heating. If filtrate is clear and slightly alkaline, then filter the whole amount through a double layer of filter paper and pour into the already sterilized test tubes. The tubes are filled about a quarter of their depth. This can be easily done by attaching a piece of rubber on the end of the funnel, to which is attached a stop arrangement by which the flow can be controlled. The tubes are plugged immediately after the filling and are then sterilized for three successive days, fifteen minutes at a time. By these repeated sterilizings at this high temperature the germs and spore that are hard to destroy by ordinary heat are killed.

The advantages of gelatine are that it is at one time fluid and at another temperature solid, and is

transparent. The germs will remain at the spot where they fall, while with the fluid stratum which Pasteur uses germs may get to all parts of the substance. To inoculate a tube of gelatine, hold the tube upside down in the left hand and loosen the cotton plug; with the platinum needle which has been sterilized in the flame take up a bit of the material to be examined, remove the plug with fingers of same hand, and plunge the needle into the gelatine, keeping in the middle line as nearly as possible and not going to the bottom of the tube. After withdrawing the needle, replace the plug, label the tube and watch developments. This is the so-called inoculation line—"Stitch-Culture." Gelatine tubes must not be placed in the sun or in a hot place, otherwise they will melt and culture be destroyed, the germs being diffused in the mass.

The different manifestations in growth are to be noticed as the distinguishing points of different germs, such as, superficial and deep growths; liquefaction and non-liquefaction of the gelatine. What relation the growth bears to the inoculation line. If a germ needs much acid from the air the growth is mainly on the surface of the gelatine. It may lie here flat or in a raised clump. The inoculation line may be thickened or have little prominences here and there. With germs that liquefy the gelatine it happens usually that the gelatine is liquefied to an equal depth. It may be slow and evaporation take place and an air space result. It may even occur at the bottom of the gelatine, while the upper part remains solid, or it may occur at different places along the line.

The inoculation streak, "Stitch-Culture." The tubes when cooling are so laid that there is a slanting surface and the streak is made by drawing the platinum needle lightly over the surface. This method is not suitable for bacteria that liquefy gelatine.

Slide cultures are made by pouring liquid gelatine on sterilized slides and then allowing them to cool. The specimen is taken up by the platinum needle which has been heated by the flame and drawn lightly over the surface. This is an excellent method for examining growths, as it can be placed under a microscope. In liquefying gelatine preparatory to making cultures it is best to melt it at as low a temperature as possible, just sufficiently to pour it out of the test tubes.

Plate Cultures.—All utensils to be used must be sterilized before using. Glass plates by dry heat. Glass jars are to be carefully washed and then rinsed out with a solution of corrosive sublimate, 1:1000. (A good formula being about 7 grains to pint of water.) When ready a piece of blotting paper moistened with same solution of sublimate is laid on the bottom and another piece, also moistened, on the inside of the cover; if a hole is cut out of this the contents of the jar may be partially seen. Now take a glass plate and hold it upside down till it is placed on the leveling apparatus, and cover immediately with a glass cover. Gelatine tubes are then heated at about 32° C.,—86-90° F.,—just sufficiently to allow the gelatine to pour but not enough to kill germs. Then remove with sterilized platinum needle the substance desired and plunge into the liquid gelatine. Repeat this five or six times and thoroughly mix the material in the tube. This is best done not by shaking so that bubbles may form, but rather allow it to flow from end to end. From this tube, labeled O, we inoculate a second tube, I. The two tubes are taken in the left hand, the plug of tube O being also held in this hand, that of tube I by the fingers of the right hand. The previously sterilized platinum needle is first plunged into O and immediately carried into the gelatine of I. Four or five times will be enough, and in the same way inoculate from tube I into tube II, and if O is to be thrown away, if thought to contain too many germs, from tube II to tube III, three plates being generally the number taken.

(Instead of paper labels for numbering the tubes pencils may be obtained that will mark glass and porcelain, made by A. W. Faber.)

When the contents of the tube are thoroughly mixed, the gelatine is then poured upon the plate under cover, commencing with tube O, or tube I, according as it is desired to retain O or not. The gelatine is spread evenly on the plate by means of a sterilized rod or with the edge or lip of the test tube, which has been previously heated, leaving a margin between the edge of the gelatine and that of the glass plate. The plate is then allowed to cool, under cover, and hastened if necessary by resting on ice. On the bottom of a jar already prepared, place a glass bench and on this the plate containing the gelatine. A second bench is placed over this to receive the next plate I or II as the case may be, prepared with the same precautions as the previous plate, the plates being labeled to correspond with the tubes, and so on. Any accidental germs that may get in will grow on the surface, while the others will grow in the depths of the gelatine. When all the plates are in the jar, cover and place away for observation, noting progress from day to day.

If the inoculation has been made from a material where probably more than one germ may be found, we can make our pure culture from the above plate cultures. When the growths on the plate are distinct and have not run together the last plate is the best one for this purpose, we make an inoculation from the growth desired to a gelatine tube, in which way a culture of but one germ is obtained.

The different characteristics of the growth on the plate are to be noticed as distinguishing different germs, just as in the tube cultures.

Agar-Agar.—This has many advantages over gelatine, the principal one being that it does not liquefy at ordinary temperatures. It is prepared in the same way as gelatine. A pound of fresh, lean meat being minced and allowed to stand over night in a litre of water, pressed and strained on the following day, and brought up to a litre by adding water. It is then placed in a clean flask with 10 grams of peptone and 5 grams of common salt and filtered. (As with gelatine, 10 grams Liebig's extract may be used with a litre of water, instead of the minced meat). To the filtrate add 15 grams finely cut agar-agar, and allow whole mass to soak over a water or sand bath at a temperature of 50-60° C.—112-140° F.—and lastly,

heated directly over the flame. Agar melts slowly and must be heated till it is thoroughly divided. It is then neutralized with solution of carbonate of soda in the same way as gelatine, and then filtered. This is the hardest part and is best done at a temperature of 100° C.—212° F.—in a steam kettle made high enough to hold the flask and funnel. It is then run into test tubes and sterilized for three successive days, fifteen minutes at a time. It is used for inoculations and cultures in same way as gelatine and is especially suitable for bacteria that liquefy gelatine. It is also good for germs that require high temperature, as in a culture oven or incubator.

Blood Serum.—Some germs, notably the tubercle bacillus, will not grow on either gelatine or agar-agar, and for these blood serum serves excellently for a stratum. Beef or sheep's blood is used, being caught from the animal in sterilized vessels and immediately placed away in the cold to quietly settle for 24–36 hours in order that the serum may form. If shaken or moved the serum becomes tinged with the blood coloring matter. When the serum has formed it is removed by means of a sterized pipette and poured into test tubes, previously sterilized, which are filled about one-third their length. The tubes cannot be sterilized like gelatine tubes and is best done in an apparatus where they lie in a slanting position at a temperature of 58°–70°C.—131°–158° F.—the former being the better, if possible, for one hour, for five or six days. When firm place the serum tubes with their plugs in a culture oven or incubator to see if they are sterile or not. The serum forms an opaque mass and the inoculations are made as streaks along the surface of the serum with a sterilized platinum needle, as with gelatine.

Bread Substratum.—This is used for cultivation of the mould and budding fungi. Small flasks are washed and dried, then plugged with cotton and sterilized with dry heat. They are then partly filled with powdered bread and just enough water added with a pipette to be soaked up. They are then sterilized by dry heat and are ready for use. The inoculations are made from the desired material to the surface of the bread.

Potato Cultures.—The potatoes must be as fresh and perfect as possible in every respect. Bits of earth adhering to the eyes must be cut out and the potatoes carefully cleaned with a brush. They are then to stand an hour in a 1 : 1000 solution of corrosive sublimate, by which the skin is made sterile. They are then placed in a pot and thoroughly steamed in a steam kettle at 100° C., being allowed to remain here from a half to three-quarters of an hour. This is sufficient for new potatoes, old ones requiring a longer time. When taken out they are allowed to cool and are then ready to be handled. Before handling, knives are to be heated in the flame and cooled, edge up, under cover; glass jars to be cleaned and rinsed out with a solution of sublimate, 1 : 1000; hands to be brushed and bathed in same solution. Potato is to be picked up between the thumb and forefinger of the left hand and cut through the middle with a sterilized knife which is not to be removed until the potato is placed in the jar, when the upper half is to be removed by means of the knife and the finger, turned over and placed in the jar. In this way the cut surfaces of the potato has had nothing in contact with them but the sterilized knife. Do the same with the other potatoes till enough are cut to fill the jar. The jar is covered after each potato is placed in it till the next is ready.

Inoculations are made by taking a bit of material to be examined on the tip of a sterilized knife and spreading it on the surface of the potato, leaving a clear margin around the border. From this a bit is taken out of the centre and spread on the second, from the second to the third, and so on. Precaution must be taken to expose the potato to the air as little as possible. If the potatoes have not been thoroughly cleansed and sterilized, it will show for itself by the growth of the potato bacillus.

Examination of Water and Counting Bacteria.—Up till lately, the examination of water was a chemical one, but it was not reliable, as it could not detect the organic elements, which have no relation to the chemical constituents. Distilled water contains plenty of germs. A good drinking-water should contain as few bacteria as possible; still, many germs are found in the air, which are perfectly harmless. On the whole, one may say that a sample of water containing 100 germs is better than one containing 1,000 germs; still, it may not be, as the 100 may contain pathogenic forms, though of course the possibilities naturally increase with the increase in number of the bacteria in a certain quantity of water. Water should always be examined immediately after removal. The circumstances surrounding any specified water should also be examined. When a well is pumped dry and allowed to fill again, there will always be found a number of bacteria in the water. If there are but 100 germs in a cubic centimetre of water, then we say that water is comparatively pure; absolute purity is almost impossible. In counting germs, a certain definite amount of material is taken with a sterilized pipette and inoculated in a gelatine tube; generally 1 cubic centimetre of water or other substance is taken to 10 cubic centimetres of the gelatine, and a plate culture made with all the precautions mentioned, the jar containing the culture placed away and noted from time to time. When growths develop they may be counted; if the plate has been marked off in squares and subdivisions the counting is rendered easier. If any of the germs liquefy the gelatine, then a new culture must be made on agar-agar.

Spore Formation.—As spores have not been studied up in the case of cocci, the knowledge of spore formation is connected with the study of bacilli. Spores are a special growth in the life of the germ. They will not stain like bacteria. In staining germs it is often found that the middle part stains less deeply than the ends which are colored intensively; this is not the real spore stage, but the one preceding it. First an oval body appears, which will not take color; this is the spore. Then the spore frees itself and leads an independent existence. They vary in shape and position: may be round, oval, and may have their long axis across the bacillus; some bacilli have

the spore in the end, forming a club. The growth of bacilli from spores occurs in different ways. It may grow out from the ends, from the side, or may bulge out broadside. For spore formation there must be a higher temperature than is necessary for the growth of ordinary bacteria. Anthrax spores will grow at 30°–32° Cent., 86°–90° Fah., and in a solid stratum. For staining see under "Double Staining."

Hanging Drop.—Special slides are made for this purpose, they being thicker than usual and the centre being hollowed out about the circumference of a three-cent piece. Slides and cover-glasses are thoroughly cleansed and sterilized. The bouillon used is the same as that used in making peptone gelatine, without the addition of the gelatine, same formula and process used in making it. A drop of this is placed in the middle of a cover-glass and inoculated with a trace of a pure culture by means of a sterilized platinum needle. The cover-glass is then carefully turned over and laid over the spore in the slide and the edges covered with vaseline, to prevent evaporation. The preparation can then be examined under the microscope and the growth observed. It is especially suitable for spore growth.

Double Staining; Gram's Method.—This depends on the fact that aniline colors do not react the same with all bacteria; from some germs the color can be entirely washed out. Bacteria are stained more thoroughly with an aniline water solution in addition to the ordinary coloring matter. The aniline water should be made fresh, gentian violet added and the preparation stained in the ordinary manner. It is then brought into a solution of iodine and iodide of potassium (1 part iodine, 2 parts of K. I. and 100 parts of water); this decolorizes everything but the bacteria. To make the aniline water solution pour aniline oil into a test-tube till it fills the concavity, then add distilled water to two-thirds or three-fourths the length of the tube, then filter; the filtrate will be clear. Add gentian violet till you have a light cloudiness, and shake the test-tube thoroughly.

Let the preparation remain in this solution five to ten minutes, when it is to be brushed through the iodine solution; generally twice will be enough, in time perhaps half a minute; then bring into alcohol, the brown color due to the iodine is then washed out, the bacteria being stained violet. For contrast color use Bismarck brown.

Staining Spores.—The prettiest results are obtained by using double staining, the spores being stained red and the bacilli blue. The best results are obtained with the spores of the anthrax and hay bacilli. Make an ordinary cover-glass preparation, using the material from the hanging drop, draw five or six times through the flame, by which the spores are made more prominent by the bacilli being more or less destroyed; then stain with the aniline water, fuchsine or violet solution, using a little heat if needed. Spores have a firmer capsule than bacteria, hence ordinary staining will not suffice. To make this solution use the following formula: Of the saturated aniline water solution mentioned under Gram's method, 100 ccm.; conc. alcoholic sol. fuchsine or violet, 11 ccm.; absolute alcohol, 10 ccm. Decolorize with absolute alcohol and acetic acid. As a contrast color use methyl blue.

Tubercle Bacilli.—An alkaline solution makes the staining solution more intense; aniline oil has same effect also.

Ehrlich's method is a solution of fuchsine or gentian violet and aniline water. It is made exactly as the solution for staining spores, using the same formula. A preparation of the suspected sputum is made on a cover-glass in the ordinary way, dried in the air and then drawn three times through the flame, care being taken not to overheat the specimen. The preparation then is placed in the above fuchsine or violet aniline solution for twelve hours, it is then brought into a solution of nitric acid and water, 1 to 10, for some seconds, where it is decolorized; it remains so long as clouds come off the preparation, ordinarily inside a minute being long enough; it must show no yellow shimmer. It is then brought into not less than 60 per cent. alcohol and washed, and for contrast color into methyl blue, is then washed with distilled water. The tubercle bacilli will be stained red, the other germ cells and elements will be stained blue. If violet has been used instead of fuchsine use Bismarck brown for contrast color. Use oil immersion lens and Abbé condenser. The process may be shortened by heating the fuchsine solution. A more rapid and as certain a method is Liehl's modification, the whole process not requiring over ten or fifteen minutes. Instead of aniline water, which must be often renewed, he uses phenol in a 4 per cent solution: Phenol, 4 grams; absolute alcohol, 5 ccm.; water, up to 100 ccm. Then add fuchsine or methyl violet, 1 gram, dissolved in absolute alcohol, 10 ccm.—3ijss. Allow the specimen to remain in this solution five minutes. Heating will have same result quicker; heat till bubbles come off, may add the solution to the cover-glass preparation of the sputum, which has been made in the ordinary way, and then heat the cover-glass over the flame. It is then brought into a 1 to 10 solution of sulphuric acid and water to be decolorized. Next come in absolute alcohol, rapidly drawn through till the cover-glass has a dirty-yellow color, is then washed with distilled water and stained with methyl blue, or Bismarck brown if violet has been used, for contrast color. Here, as by the preceding method, the tubercle bacilli are red, remaining elements blue. Tubercle bacilli react very slowly to aniline colors; on the other hand, they are hard to decolorize. Care must be taken not to allow the specimen to remain too long in the decolorizing solution, else the tubercle bacilli will be decolorized. In a suspected sputum the parts most likely to contain the bacilli are the little ronnd clumps of material.

Pure Culture of Tubercle Bacilli.—With a platinum needle make an inoculation of the suspected sputa on the blood serum that has been described. As the germs grow, if pure, have a grayish-white layer on the serum; the bacilli grow slowly. To prevent the entrance of other germs, heat the end of the tube, together with the cotton plug; may also place a drop of sublimate on the cap to prevent evaporation.

Place in culture oven or incubator, at a temp. of 35° Cent., 95° Fah. It may be ten days before a growth is noticed.

Staining Cuts of Tissues.—Small pieces of material to be examined are hardened in alcohol, remaining here twenty-four to forty-eight hours at least, when they will have the consistency of soft cork. They are then stuck on pieces of cork by means of glycerin gelatine, made by 1 part gelatine being placed in water till it has swollen to double its volume; it is then placed in 1 part of glycerin and heated over the flame, thus making a mucilage. It is then glued on a cork by this mucilage and again placed in alcohol for further hardening. Cut with a micistome.

Cut is then placed in the ordinary solution, where it spreads and in a few minutes has absorbed the dye, it may be overstained and may sink a little. From five to ten minutes is long enough to leave the cut in the staining solution. It is then washed off with alcohol; clouds come off and cut looks pale and shrunken. The germs and cell nuclei remain stained, the remaining elements being decolorized. It stays in absolute alcohol one or two minutes to remove water, is then cleared up with cedar oil and mounted in Canada balsam.

Cuts may be double stained according to Gram's method. They are placed in a solution of the fuchsine aniline water solution, next in the iodine solution for from one-half to one minute; this renders the cut brittle. It is then placed in alcohol while clouds come off, and next in absolute alcohol to remove the water. For contrast color use Bismarck brown for one or two minutes, place again in absolute alcohol, cedar oil and mounted in Canada balsam.

Germs are found in different parts of the tissues. Anthrax bacilli are found in the liver and lungs, often in clumps.

Tubercle Bacilli in Cuts of Tissue.—Fiehl's method is the best for this purpose. The cuts are placed in the carbol-fuchsine solution for ten minutes, then rapidly in the 1 to 10 sulphuric acid solution, and next in alcohol till clouds have all passed off. For contrast color let it stand in methyl blue for five to ten minutes. Is next placed in absolute alcohol to remove the water, cleared up in cedar oil or bergamot oil and mounted in Canada balsam. They cannot be stained by Gram's method. The bacilli are red, while all else is blue. The bacilli are found in the cells, especially in the giant cells, and are generally in that part of the cell farthest removed from the nucleus; may be found irregularly in the tissues. When cells break down the bacilli are set free.

All sorts of animals are susceptible to the tubercle bacilli. If inoculated in a cutaneous vein, tuberculous affection will develop in fourteen days. A solution containing the bacilli may be injected into the peritoneum, localizing the process there.

Inoculation Experiments. — Use ordinary house mice or white mice. The animal is held by an assistant or is hung in a glass jar which is about six inches deep, covered by a piece of wire gauze. This gauze is raised enough to admit a pair of forceps to seize the mouse's tail; this is drawn out, the animal hanging inside, and held by the thumb and forefinger, keeping the remaining fingers on the gauze to keep the animal in the jar. Then the hair is clipped away at the base of the tail and a V-like cut made into the skin with a pair of scissors. A lancet is then introduced to make a pocket, and the inoculation made in this pocket. Of course all utensils are thoroughly sterilized. The animal is then dropped back in the jar and watched from day to day.

THREE BAD CASES OF OVARIOTOMY; TWO DOUBLE, ONE SINGLE.

Read before the Medical Society of the District of Columbia, November 23, 1887.

BY JOSEPH TABER JOHNSON, M.D.,
OF WASHINGTON, D. C.

Case 1.—Mrs. M., white, æt. 51, married and the mother of several children, first noticed an enlargement in the left side of her abdomen four years ago. It grew rapidly and gave her considerable pain. She became an invalid and for the past year was unable to leave her house, and for the last six months was compelled to stop in bed, partly on account of failing strength, and partly on account of the large size of the tumor.

She had been treated to the materia medica mostly, and the entire surface of the abdomen bore evidence of the vigorous and lavish use of iodine. She was sent to me by Dr. Klipstine, of Alexandria. The patient's home, however, was at Rappahannock Station, Va., and she was brought to Washington by her son-in-law, Dr. Quackenbosh, of Florida. As she was not able to sit up, a section was taken for her in a sleeper, and she bore the journey very well. I had her taken at once to a private room in the Providence Hospital, where she was put to bed and allowed to rest.

Upon examination I found an enormously enlarged abdomen which gave the impression of containing a unilocular cystic tumor, so clear was the wave of fluctuation. I thought it would weigh at least fifty pounds. The weight was so great that the patient found it impossible to lie for any length of time on her back, but rested for the most of the time on her left side in such a position that the bed supported the weight of her burden.

For several weeks the patient had been voiding less urine than normal, some days less than a pint, and that contained albumin. She suffered from nausea, constipation, indigestion, and got little sleep. She was certainly in a bad way, and was rapidly growing worse. Her pulse was rapid, weak and intermittent, and her temperature 99° in the morning and 101° + in the evening. I did not think her case a favorable one and was loth to operate. I had had a series of eighteen ovarian operations without a death, and I was reluctant to spoil my record; but the patient and her son-in-law were anxious to take the chances—if she had any chance, and I agreed to operate if the Consulting Board of the hospital would divide the responsibility with me.

After examination three days later by the Board an exploratory incision was recommended and Mon-

day, November 7, fixed as the time. We feared she would die from the anæsthetic; we had not much choice between chloroform and ether, as both her kidneys and heart seemed equally affected.

Ether was administered by Clover's inhaler, and although she was on the operating table nearly an hour she only took about 2 ounces. That part of tumor above the umbilicus only, was fluid. The remainder of the mass was composed of a great number of cysts containing fluid too thick to run through a large trocar, and it became necessary to turn the patient upon her side and actually bale her abdomen out with both hands. The sac, fortunately, had few adhesions. When the running mass was turned out of the abdomen and the pedicle reached it was at once compressed by strong forceps and the tumor cut away. The uterus had projected from it a fibroid growth with a long pedicle about the size of a hen's-egg; this was too tempting to leave, and I transfixed its stem, tied it on both sides and cut it off. I then searched for the other ovary, which I found enlarged, flattened and very hard, above the navel, and imbedded in the folds of thinned out broad ligament and parietal peritoneum.

While I was lifting this out Dr. Bulkley, who was standing by the patient's head, reported that she was dead. I heard several other physicians agree with him that it was useless to proceed, but I did proceed deliberately in the removal of the second ovary. I remembered Dr. Gill Wylie's suggestion that hot water in the cavity overcame shock, and as this cavity was sadly in need of the cleansing as well as the heating effects of water, I at once poured several pitcherfuls of distilled hot water into the abdomen, and she promptly rallied, her tongue was pulled forward and she had no more trouble. I baled out her abdomen again, closed the wound, applied the dressings and put her to bed. The doctors all looked sorry for me and said of course she would die—but she hasn't died and is doing very well to-day, which is the eighteenth since the operation. She has taken no opium, as she has had no pain. Has had some stimulants and quinine and one purge. Her bowels moved naturally on the seventh day. I was delighted at this, as I had injured an intestine slightly by compressing a fold of it in a pressure forceps applied to a bleeding point in the omentum. I discovered this when I removed the forceps, and had Dr. Cuthbert hold it at least five minutes in his fingers to determine the extent of injury. When everything else was finished I again examined it and decided to drop it back without doing anything, as it was only bruised. No harm has resulted. Her pulse and temperature are now normal. Tumor weighed 54 lbs.

Case 2.—Mrs. Q., æt. 35, Irish, mother of five children and has had several miscarriages, first noticed a tumor five months ago. She was sent to me at Providence Hospital by Dr. Frederick, of this city. Dr. Lincoln saw the case in consultation with Dr. F., and a diagnosis of ovarian tumor was made. Mrs. Q. had been attended by Dr. F. for an attack of pelvic inflammation quite recently, and the last two months the patient had been suffering from peritonitis.

Upon admission to the Hospital I found the abdomen very tender. She was compelled to stay in bed three days from the effects of my examination and took morphine to allay pain. Her pulse ran from 94 to 112, and her temperature remained constantly above 100°. After treating her for about ten days I saw that she was getting no better and determined to operate as the best way of affording relief. Accordingly, on Monday last I opened the abdomen, and found a general peritonitis everywhere throughout the cavity. It was impossible to separate the peritoneum from the cyst, therefore, after making a slight puncture with the point of a scalpel, I pushed a large trocar through to the peritoneum and cyst wall and let out about a gallon of dirty brownish-black fluid. With my finger-tips I finally succeeded in separating a little of the peritoneum, and gradually the whole of it was peeled off. The omentum and intestines were also glued to every portion of it where they had contact. The omental adhesions were so general that a large mass of it was withdrawn from the cavity and covered with warm carbolized towels. Much of this had finally to be cut off to arrest the bleeding. Numerous other points were ligated. There was a general oozing from everywhere in the cavity, and after the removal of the other ovary, which I found to be cystic, I poured into the cavity a number of pitcherfuls of hot water until it came out but slightly reddened. I then put in a drainage-tube and sewed up the wound.

Her pulse is now 70, and temp. 99.4°, being less to-day than before the operation, and I believe the patient will recover. No more fluid coming through the tube, it was removed this morning.

Case 3.—Mrs. H., æt. 67, widow, mother of several children, came to the charity ward of the Providence Hospital about ten days ago. Her abdomen was very large and she had sprung a leak on her way up to the hospital. She had been tapped a week before coming. The puncture had opened, and for three days she kept the nurses busy changing cloths and beds. She stated that the tumor began to enlarge and to trouble her about two years ago, but thought it had been growing at least six years. When she was first tapped she was much prostrated. She was tapped again in two months, and again in two months. For the past year the tapping has been repeated every two weeks, so that in all she has been tapped thirty-seven times. Never less than a bucketful was drawn away, and frequently more, and counting a bucket at 10 quarts, we would have 370 quarts, or 740 pints; so that I could say that she has lost about 800 pounds of fluid within two years.

She applied to a distinguished obstetrician a year ago for a diagnosis and desired an operation, but was told that she had enlargement of the liver and dropsy, and that nothing could be done. The Consulting Board of the hospital advised me to make an "exploratory laparotomy with power to act."

Immediately after the operation on case No. 2 just reported, I had her etherized with Clover's inhaler and put on the operating table. The usual incision was made as for ovariotomy, and a cystic growth discovered at once. This was punctured and found to

be multilocular and colloid. Many cysts were opened and a bucketful of fluid finally drained away. The opening had to be enlarged up to the navel, and after much manipulation and traction an immense semi-solid mass was delivered which was estimated to weigh at least 20 lbs. The pedicle was about 4 inches broad, and had to be ligated in four places under the forceps, which had been applied to enable me to cut away the great mass which was so difficult to hold. The cavity was then thoroughly cleansed, the wound was closed with a dozen silk sutures, and the old lady put into bed. She rallied well, and this evening was very bright and feels perfectly certain that she will get well, and is passing wind and water normally. Pulse and temp. under 100.[1]

OPERATION FOR GALL-STONES: CONGENITAL ABSENCE OF GALL-BLADDER: DEATH.

BY M. STAMM, M.D.,
OF FREMONT, OHIO.

The following case, although it terminated fatally, still, I think, presents some interest from a pathological as well as surgical standpoint. Congenital absence of the gall-bladder has been fonnd in a few post-mortem cases; no mention, however, has been made, to my knowledge, of the presence of gall-stones in the bile ducts under such circumstances. I also think that no such a case has been operated upon, at least not reported.

Mrs. L., age 63 years, has for the last eight years been suffering from severe paroxysmal pain in the epigastric region, coming on almost regularly after breakfast. About two years ago she called at my office and, as she located the pain over the gall-bladder, and told me that it was at times followed by slight icterus, I made a diagnosis of the presence of gall stones. I prescribed for her with a view to such a condition but, as all medication at the hands of other physicians had hitherto proved without effect, she gave my medicine only a very short trial and, of course, with similar dissatisfaction. About the end of October, 1887, she fell from a chair, striking against her stomach and causing very severe pain over that region, which, however, lessened consider ably in a few days. An intense icterus meanwhile made its appearance, combined with severe itching, especially at night, so that it deprived her very much of her sleep. Her appetite was very poor, bowels moved once a day or every other day, stools were gray-ish-white, resembling putty in color and consistency. Her urine was free from albumen, but rich in biliary coloring matter. (Chloroform test.) Her liver was enlarged, especially the left lobe, but no enlarged gall-bladder could be felt. Her history, however, before the accident, the intense icterus, and a pinching sensation in the region of the gall-bladder made the suspicion of mechanical obstruction by gall-stones very strong in my mind. As the severe pruritus cutaneus drove the patient almost to distraction, and as she had lost all faith in medicine, she asked me whether an operation might not afford some relief, or at least end her misery in some other way. I told her that we might make an exploratory incision and if feasible we would attempt to remove the gall-stones. Though aware of the dangers of such an operation, the patient eagerly accepted this proposition. The evening before the operation her temperature was 99½, in the morning it was normal.

Operation, Thursday, January 19, 1888.—Patient vomited repeatedly during the administration of ether, also during the operation. I made a T-shaped incision, the transverse cut parallel to and 1½ in. below the ribs, the longitudinal cut externally along the rectus abdominis muscle to a little below the umbilicus. Owing to the large amount of adipose tissue the incision had to be made of such a length. The liver was found enlarged, principally its left lobe. A careful search made for the gall-bladder; it, however, was conspicuous by its absence, and in its place was found a projection of the liver substance, but harder than the surrounding tissue. On pressure I thought I could hear a grating sound. Dr. Caldwell, who was my nearest assistant, independently noticed the same fact. On further examination I also found that this projection contained three solid nodules which suggested the idea of their being either gall-stones or cancer. The introduction of a needle even did not settle the question fully in our minds, and for a moment closure of the abdomen was suggested. After a moment's reflexion, however, we determined to cut down upon these nodules. After I made an incision through about .5 cm. of tissue a few drops of a milky fluid escaped and then I struck a stone 1.5 ccm. in size and the shape of a die; after its removal two more were found, of equal size and shape. I succeeded from this place in introducing a steel sound into the common bile duct and found no further obstruction. The stomach and duodenum were adherent to the liver near the venous duct, but I made no attempt to separate the adhesions. Under considerable difficulty the incision was closed by four silk sutures, and, as I was afraid of some oozing of bile or blood, I left some iodoform gauze at the place, after Miculicz's method (tobacco-pouch), as it perhaps might serve to indicate such an event. As four silver sutures broke during the abdominal closure, not at the place of twisting but where they pierced the peritoneum, I became rather partial to braided silk, and think I will use it altogether in the future.

The patient rallied well from the operation, and for the first twenty-four hours did very well, with the exception that she did not pass over two ounces of urine. On the second day, however, vomiting set in which gradually increased in frequency, so that on the third day it became incessant. Although she swallowed nothing but ice pills she vomited up considerable quantities of greenish-black material. Her temperature never exceeded 100°, pulse and heart-action remained very feeble after the operation, the jaundiced condition of her skin and eyes seemed to clear up. Death ensued about sixty hours after the

[1] March 26, 1888.—These three bad cases made good recoveries, and are alive and happy to-day. I have now had a series of 24 ovarian operations without a death, the last being done in my private hospital seven weeks ago.

operation. During the whole time the quantity of urine, voided through catheter, did not reach 3 ozs.

Post-mortem examination was performed under protest, which made me resort to the pretence that I would remove the iodoform gauze left in for drainage and secure better closure of the wound, it therefore had to be done in a hurried manner. The abdominal wound looked fresh, peritoneum in some places was already well adherent. The bowels were streaked with a little bloody serum but no coagulation was found, except in the transverse cut between the muscles; it had no connection with the peritoneal cavity since the peritoneum under it was well closed. The liver was considerably enlarged, somewhat pale and yellowish, and the wound made for the removal of the gall-stones was in a very good condition, well agglutinated. There were no signs of bile or blood visible. The adhesions between liver, stomach and duodenum could be easily separated. There was absolutely not a vestige of the gall-bladder to be found. The bile ducts were dilated and patent, also streaked with some biliary fluid. The cavity where the gall-stones were located seemed to empty right into the common duct, its walls were thick, and seemed overlaid with a thick stratum of liver substance. The stomach and duodenum were filled with about half a pint of greenish-black fluid. Spleen was normal but somewhat pale. Right kidney was small and quite brittle, of a grayish-red color. Left kidney of normal size, very pale and showed signs of fatty degeneration. The heart was covered with a layer of fat, its walls were thin and very flabby, the valves were intact. The lungs were very pale, but otherwise normal.

REMARKS.—From the clinical course and the post-mortem appearances of the case I gained the conviction that the death of the patient could not directly be charged to the operation. The fatty condition of the heart and kidneys, with consecutive suppression of urine, were more responsible for it. I think had the case been operated upon a little earlier, or could the real condition have been foreseen, the result would have been much better. The operation lasted over two hours, and the bowels were eventrated and kept in disinfected cloth during most of this time; this was certainly sufficient to produce a severe shock to a patient whose blood had been poisoned with bile for nearly ten weeks, and the degenerated condition of her heart and kidneys would hardly allow her to rally from it fully, Had I known of a similar case that might have served me as a guide there would have been much less delay in the operation. The novelty of the condition made the diagnosis between gall-stones and cancer also somewhat uncertain, which necessarily prolonged the operation. In other words, I could perform the operation in a similar case in about half the time, which would certainly influence the result very much. As the wound in the liver was well agglutinated and no signs of bile or blood oozing were present, I think the strip of iodoform gauze can be done away with in future. This case further teaches that we should not abstain from an operation even if we cannot detect any tumor or enlargement of the gall-bladder.

SARCOMA OF THE SUPRA-RENAL CAPSULES.

Read before the Medical Society of the District of Columbia, November 23, 1887.

BY I. W. BLACKBURN, M.D.,

GOVERNMENT HOSPITAL FOR THE INSANE, WASHINGTON, D. C.

The specimen of tumor that I exhibit was removed, post mortem, from the body of a patient at the Government Hospital for the Insane. The patient was a male, aged 48 years; nativity, Germany; occupation, soldier; mental disease, chronic mania of thirteen years duration. He was at one time violent, but for many years was quiet and did light work in the tin-shop of the institution.

He had for some time suffered from hæmorrhoids, and had lost much blood from this source, and he frequently complained of pain in his right side, attributed by himself to "liver complaint;" on account of this pain he wore his clothing very loose. He was anæmic and his skin was yellowish, but not distinctly jaundiced. Death resulted from exhaustion and anæmia.

The body was in a fair state of nutrition; the skin yellowish; slight prominence of the right hypochondriac region.

The brain and its membranes were first examined, but nothing of interest was revealed except slight internal pachymeningitis, and extreme pallor of leptomeninges and brain.

On thoracic and abdominal section the organs were found to be much displaced by a large oval tumor, situated in the right hypochondriac region beneath the right lobe of the liver. The right lung was pushed upward, and the heart and left lung upward and toward the left, and the liver extended downward five inches below the ensiform cartilage, and across into the left hypochondrium.

The tumor was adherent to the liver and to other structures in the vicinity, except a small portion of the anterior surface which was in contact with the abdominal wall and covered with plastic lymph.

By careful dissection the tumor was removed with the liver, and the specimen was photographed to show the relative size. The tumor when removed from the liver weighed 97¼ oz., and measured in its long axis, 8⅝ inches; in its short axis 5⅞ inches. It was completely encapsuled; regular in contour; soft, and fluctuated slightly. It was cut through the middle, and 9½ oz. of blood-tinged fluid escaped. The cut surface showed three concentrically arranged nodules, which bulged slightly from the surface, and were mottled and streaked with blood. They appeared to be more recent than the other parts of the tumor and probably were centres of growth. The greater portion of the tumor was brownish in color and very friable, the result of degenerative change.

The capsule was tough and fibrous, and averaged about ⅛ inch in thickness. The growth of the tumor had caused great atrophy of the right lobe of the liver, and the right border, where stretched over the tumor, was thinned and fibrous. The left lobe seemed relatively enlarged. The weight of the liver was 65½ oz.; the tissue was bile stained, but

otherwise normal. The gall-bladder contained 155 calculi of various sizes. Some were imbedded in the walls, and to be cut out, and one of the larger was firmly grown into the mouth of the duct, completely obstructing it. The common duct was pervious.

The right kidney was displaced downward and toward the left, and was firmly adherent to the capsuli of the tumor, by a fibrous band. No trace of the supra-renal body could be found, its place having been taken by the tumor. The other organs, including the supra-renal capsuli of the left side, presented nothing worthy of note. No secondary growth was found in any organ.

The macroscopical as well as the microscopical appearances show the tumor to be a sarcoma. Primary sarcoma of the supra-renal body is more common than primary carcinoma; the latter is very rare, but secondary carcinoma is not uncommon. Sarcomata of the supra-renal bodies occasionally reach great size. Wilks and Moxon record a case of sarcoma of both supra-renal capsules, in which the tumors were the size of a fœtal head at full term,[1] and a primary melanotic sarcoma the size of an adult head, was seen by Küssmaul.[2] The tumor I exhibit was fully as large as an adult's head.

Microscopical examination shows the tumor to be of the large-celled round-celled type, with a slight tendency toward alveolar arrangement in some parts. Though the large round cells are most numerous, all shapes and sizes may be seen, and a distinct intercellular reticulum is present. Small bands of spindle-shaped cells and delicate connective tissue run through and divide the cells into imperfect alveoli. Blood-vessels are numerous in the recent portions, and are seen to have imperfect walls. The brownish portion shows degeneration of the cells, but the same general structure. Though no proper glandular structure can be found, the sarcomatous cells have wonderfully preserved the shape and general character of the cells of the supra-renal body. Fields may be found which admirably show this curious tendency of sarcomata, to reproduce the characteristics of the mother-tissue.

MEDICAL PROGRESS.

ESTLANDER'S OPERATION, ON THORACOPLASTY.—MR. A. PEARCE GOULD, in a paper in which he records four cases, says: Thoracoplasty must be clearly distinguished from the much simpler procedure of removal of a small portion of one rib for purposes of drainage. It is, as its name signifies, a "plastic" operation. We are all familiar with cases of empyema which refuse to heal in spite of long-continued free drainage of their cavities. The compressed lung has expanded to the full extent possible to it; the mediastinum has been displaced; the diaphragm has risen, and the chest wall has fallen in until the ribs are in contact, and yet a cavity remains. To occlude such a cavity by a growth of granulations is impossible, and the patient slowly advances to the grave, worn out by the continued suppuration, or is more suddenly carried off by acute tuberculosis or cerebral abscess. It is to save these lives that Estlander devised this operation, and it should be restricted to such cases, and not undertaken until ample time has been allowed for the natural cure of the empyema to be accomplished —a cure that most often results from a well-devised drainage operation. It is important to emphasize this point, lest the success attending it should tempt the surgeon to perform the operation merely to *save time*. The severity of the operation is such that it is only justifiable when it is plain that it is demanded to *save life*.

As to the operation itself, I need add but few words to the descriptions already given, and these shall have reference to but three or four points. And the first is the necessity for carefully exploring the cavity to be treated either before the operation or as a first step in it. This necessity arises from the fact that the operation must be specially planned for each case, for its success depends upon the whole of the unyielding bony boundary of the cavity being removed. It is not a matter of removing a certain length of a certain number of ribs, but all the ribs lying in the wall of the empyema must be excised. The surgeon should therefore first of all determine the vertical and the antero-posterior extent of the cavity. The best way of doing this is by the finger, and I prefer, first of all, to enlarge the fistulous opening until the finger can be freely passed in to explore the cavity; but of course much information can be obtained by intelligent probing. The ribs to be removed have generally been exposed by raising a flap of the soft parts over them, and Mr. Godlee in his valuable Brompton Lectures advocates that plan. I have not found this necessary; a single vertical incision is all that is required. Raising a flap makes a more extensive wound; but another and perhaps more grave objection to it is that it is often impossible to decide before hand exactly how far the cavity extends in all directions, and therefore how large the flap should be. I strongly recommend a single vertical excision through the skin and muscles in preference to raising a flap. To excise a rib, the periosteum should be separated all round by a respatory, and if a long length has to be removed, it is best to cut it away in two or even three pieces. If the cavity extends far back toward the spine, it will be found convenient, after removing the front portion of the rib in the usual way, to remove the posterior part from the inside, peeling the thickened pleura off the bone, and applying the cutting forceps from within the chest; this simplifies the operation, and disturbs the soft parts less than the other plan. Should the cavity reach high up, the second rib may be safely removed; but of course the first rib must not be touched owing to its close relation with the subclavian vessels. I would here again lay stress upon the necessity of carefully removing *all* the bone in the outer wall of

[1] International Encyclopædia of Surgery, vol. v, page 1087.
[2] Cornil and Ranvier, page 601.

the empyemic cavity, so that only a soft and easily collapsing wall of soft tissues is left. And not only must the bone be fully removed. Lining the ribs, in these cases, dense cicatricial tissue, half an inch or an inch in thickness, is found, which is almost as unyielding as bone; it, too, must entirely be cut away with scissors. The hæmorrhage attending the operation may be considerable. If care is taken in peeling off the pericostal membrane, the intercostal vessels should escape injury; but many branches are cut, and they bleed freely. If any arteries spurt, they should be sized in compression forceps. For the rest, it is best to complete the operation as quickly as possible, and then thoroughly irrigate with a weak corrosive sublimate solution. The skin wound should be closed with sutures, and, if necessary, drainage may be secured by means of a special incision. Thoracoplasty is a much more severe operation than the mere drainage of an empyema; the shock produced is considerable, and great care is necessary in the after-treatment. Not *all* cases of chronic fistulous empyema are to be treated by thoracoplasty, for its danger to life must negative it when there is serious visceral disease and the vital powers are at a very low ebb.

The results of the operation may be either partial or complete success. In some cases a sinus remains behind; but this is a much smaller surface than previously suppurated, and the condition of the patient is to that extent improved. Such a result, however, cannot be called very satisfactory; it is, I believe, due to the operation not having been sufficiently complete, some part of the bounding wall of the cavity having been left rigid and unyielding. I believe full success is only to be anticipated where all physical obstacles to the entire obliteration of the cavity have been removed. The cases of complete success will become more frequent as the operation is more completely executed. Such patients have a great deformity of the chest, but the cessation of all discharge is quickly followed by great improvement in the general health. It is to be hoped that the cases requiring thoracoplasty will become fewer and fewer as the surgical treatment of empyema is resorted to more early and is more efficiently carried out. But for a small residue of very chronic and otherwise incurable cases of fistulous empyema, Estlander's operation, when very thoroughly carried out, offers a good chance of cure. When once the necessity for operation is recognized, the sooner it is carried out the better, for marked exhaustion or serious visceral disease renders the operation too dangerous to be recommended.—*Lancet*, Feb. 11, 1888.

Wounds of the Head.—S. Ginger discusses the cases of traumatism of the head treated in the clinic of Czerny from 1877 to 1884, inclusive. There were ninety cases of wounds of the soft parts. The treatment consisted in shaving the head, cleansing with alcohol or turpentine, followed by washing with 2 per cent. to 5 per cent. solution of carbolic acid, or a 1 per cent. solution of sublimate. The wound was then sutured with silk or catgut. In severe cases a drain or two was inserted. Iodoform was then dusted on the wound and a Lister dressing applied. It is noted of forty-eight incised wounds thirty-three united by primary union. Of six wounds with large scalp flaps, two healed primarily. In favorable cases recovery from these wounds was completed in four to eight days. If the secretions of the wound were profuse the Lister dressing was discarded and open treatment with salicylic solution or 2 per cent. acetate of aluminum was adopted. Erysipelas delayed recovery in six cases, proving fatal in one. In twenty-three cases of fractures of the bones of the cranium, the parietal, frontal, and temporal regions in the order named were the seat of traumatism. The patients were brought to the hospital in a state of unconsciousness which lasted a variable length of time. In lesions of the brain substance an approximate localization is possible in most cases.

The brain and meninges are favorable seats for the development of various forms of inflammation (meningitis, encephalitis, pyæmia), and after years an apparent recovery may be complicated by the development of a series of symptoms due to brain abscess. Such abscesses are fatal in the majority of cases. Neuroses and psychoses may develop and the more so if the local lesion in the brain takes the form of trauma of a centre with formation of a cicatricial tissue. Frequent congestions, intolerance of alcoholics, localized headaches, dizziness, paræsthesias, functional disturbance of the senses, all forebode such complication of a beginning psychosis. In extensive disturbance of the brain substance and large extravasation, deep coma and complete absence of reaction was present. There was also a reactionless pupil, irregular frequent pulse, increased temperature, shallow frequent respiration, in some cases of Cheyne-Stokes' character; death occurred in these cases from cardiac failure of œdema of the lung. The treatment was a strictly antiseptic one, and narcotics, etc., were used symptomatically, but it is to be remarked that where trephining was necessary this was carried out with the mallet, chisel, knife and scissors, seldom with the trephine. In addition to trephining for splintered fractures, abscess and depressions, the indications laid down by von Bergmann and Wiesmann are recognized in this clinic. In fourteen cases of trephining recovery resulted in nine cases. In those cases which proved fatal after trephining the fatal issue was due rather to the severity of the injury. The operation rather retarded the fatal issue. Most favorable and rapid was the recovery of those fractures where the brain substance remained uncompromised. The less the extent of the bony lesion the more rapid and complete the recovery. Where the motor centres were affected by the traumatism, functional nervous disturbances resulted which may, after a period, have retrogressed. The prognosis is best in the first class of cases, and reserved where the brain substance, but not the motor centres were affected. In children especially a certain reserve in prognosis should be the rule, for here, though extensive lesions may end in immediate recovery, yet the statistics show that

such patients in later life form a prominent quota of those suffering psychoses. In compound fractures of the skull, therefore, lesions of the absolute cortical centres give a more unfavorable prognosis than lesions of the relative cortical centres. If paralysis has not improved after five or six months after compound fractures of the skull, they may be considered permanent. In all extensive compound fractures the possibility of abscess must be considered. In all in-injuries of the head, moreover, where the brain substance is injured, psychoses and neuroses *may* develop subsequently. Strict antisepsis should be followed in all these cases. Author records twelve cases of fractures at the base of the skull; three proved fatal. The prognosis is favorable in those cases where the brain symptoms are slight and short in duration. The most frequent disturbances of hearing and vision improve if the tympanum alone has been ruptured and the labyrinth in the one case and the optic nerve in the other have not been compromised. Paralyses are permanent which do not recur to the normal condition or show signs of improvement within a few months. The possibilities of subsequent brain abscess or psychoses must be considered. The frequent douching of the nose and ears with antiseptic solutions is imperative. The antiseptic tamponade of the ear is advocated. In obscure concussions of the brain (Beck) where the lesion of the brain substance is slight capillary apoplexia and absorbable exudate, the prognosis is good as regards the immediate recovery of the patient. It is a guarded prognosis, however, when future psychical complications are in question—*Deutsch. Zeitsch. f. Chir.*, Bd. xxvi, Hft. 3 and 4.

SURGICAL TREATMENT OF DEEP-SEATED PERIRECTAL ABSCESS.—In Professor Bruns' *Beiträge zur Klin. Chir.*, Band iii., Heft 2, DR. HEINRICH ZELLER, of Tübingen, argues that perineal incision is the most rational and the proper method of opening a perirectal abscess situated above the levatores ani and coccygei muscles, and presenting a prominence and fluctuation within the rectum without forming any appreciable projection on the surface of the perineum. The perineal has, it is urged, many advantages over the rectal incision. The former permits a strict application of the antiseptic method, which, if the abscess be opened by the rectum, must be practiced under very unfavorable conditions. In the perineal incision the abscess is opened at its deepest part, and so a free and ready discharge of the pus is favored. The opening in the perineum can always be made to a sufficient extent, whilst when made in the rectum it will necessarily be limited on account of the risk of bleeding, and therefore is liable to be insufficient for the purpose of draining the abscess. The perineal incision guards against further rupture of the abscess in other directions, and should an urethro-perineal fistula be formed, this can be more easily dealt with than an urethro-rectal fistula. Moreover, the perineal incision has the important advantage of preventing a communication between the abscess and the interior of the intestine. In this contribution reference is made to seven previously recorded cases of perineal incision of deep perirectal abscess, and reports are given of three recent instances of similar treatment in the practice of Professor Bruns. In those ten cases the patients all recovered. In four cases urethro-perineal fistula had formed in consequence of rupture of the abscess into the urethra before the perineal incision had been made. In each of these instances the fistula retarded the healing of the abscess, but at last was completely closed. In not a single case was the incision into the perineum followed by rupture of the abscess in any other direction. Of the subjects of thirteen collected cases in which the deep abscess was opened by the rectum, two died—one from purulent infection, the other from perforative peritonitis. The perineal incision has been made in some cases in the middle line of the perineum or in a line parallel to this; in others, in the line of the incision for lateral lithotomy; but, as a rule, its situation should correspond with that of the abscess. After the skin has been divided, the surgeon should make his way to the abscess more by the use of blunt instruments than of the knife, and every bleeding vessel must be secured. The depth of the wound, when the abscess has been reached, varies very much in different cases. In each of the three cases reported by the author it was about four inches; in some cases, especially when the abscess has descended, it is much less. If the diaphragm of the pelvis formed by the levatores ani and the coccygei has not been perforated, the surgeon must work to a depth of at least one inch and a quarter. If the abscess be large, it will usually be opened without any difficulty. If the incision be made at an early stage, and when the collection is small, the operation may be facilitated by the introduction of the forefinger of the surgeon's left hand into the rectum, so as to press down the abscess towards the surface of the perineum, care being taken not to carry the knife too near to the gut. The relative position of the urethra to the abscess may be indicated by passing a catheter. After the discharge of the purulent contents, the surgeon should pass his finger into the cavity of the abscess, in order to search for any secondary cavities or prolongations. The cavity should then be washed out with some antiseptic fluid, and, after the introduction of a drain-tube, the seat of the operation should be carefully covered by a dressing of iodoform gauze.—*London Medical Recorder*, Feb. 20, 1888.

TREAMENT OF DIPHTHERIA.—An elaborate paper on the management of diphtheria by DR. G. GUELPA, is concluded in the issue of October 30, of *Bulletin Gén. de Thérap.* The special point brought forward by the author is "*irrigation, the most frequent possible.*" He has employed a solution of the perchloride of iron for this purpose, chiefly from habit, but other solutions—of lime, carbolic acid, and boric acid—may, he admits, be quite as efficient—may be more efficient—for the agent used is quite secondary, the main consideration being the frequent irrigation. Dr. Guelpa advocates the early and persistent, and

almost continuous application to the parts threatened with an extension of the diphtheritic process.

Cauterizations are negatived. Perchloride of iron solutions, 5 to 10 per 1000 in strength, have proved most successful in a long series of cases of different periods. The irrigations are practiced every quarter of an hour during the day, and every half hour at night, in the milder cases with moderate force through the fauces and nares, as is done with the nasal douche; but when the resistance to the passage of the fluid requires it, the hand-ball should be used to pump the fluid through. When irrigation is practiced early and efficiently, it is comparatively rare to find the disease spreading to neighboring parts. It is relatively easy to bear by the patient, and to apply by the attendants.

As Dr. Guelpa submits many cases illustrating the utility of the method, there can be little doubt of its value. There are no difficulties in the way. As it is the irrigation rather than the character of the medicament that determines the result, the practitioner has a wide choice of materials, and, hence, those objecting to the disagreeable iron chloride, can employ other medicaments. Probably, those agents, having a solvent action, as papain, lactic acid, lime, etc., can be used with the expectation of the best results. *It is the early, frequent, and copious irrigation that accomplishes the important curative results obtained by Dr. Guelpa's method.—American Journal of the Medical Sciences*, January, 1888.

Influence of Obesity in Young Women upon the Menstrual and Reproductive Functions.—In a paper on this subject Dr. Andrew F. Currier says: It is somewhat surprising that the law which evidently obtains in this matter has been so generally overlooked by modern and contemporary observers; at least I have found very little reference to it in recent literature. That law may be formulated in the following terms:

1. A woman under 30 years of age who bears four, five, six, or more children in rapid succession and suckles them, prematurely reaches the limit of her physical powers as a reproductive animal, the phenomena of the climacteric supervening. This applies to the average woman under present conditions of civilization, and, in a marked degree, to those who become obese after so frequent pregnancies.

2. A woman under 30 years of age who becomes obese, from whatever cause, will, as a result, be subject to amenorrhœa, or oligomenorrhœa (a term which I have proposed as a synonym for scanty menstruation) and usually to dysmenorrhœa, though menstruation may previously have been nearly or quite painless. If such patients be married sterility will be the rule. This law, like most other laws, has more or fewer exceptions, but observation and reflection during a not inconsiderable experience have convinced me of its existence.

The prognosis in many of these cases may be considered exceedingly good, excluding, of course, those in which the climacteric has followed extraordinary fruitfulness. For the latter the condition of sterility is permanent, and I doubt whether any system of treatment could change it. It is the order of nature. For the others a properly regulated diet is of primary importance, hydrocarbons being eschewed in favor of albuminoids. Alcohol in any form is contraindicated. Suitable exercise must be insisted upon, either by the performance of the active duties of household life or a suitably arranged course of gymnastics, including *massage*. Worthington recommends the systematic use of the waters of Vichy, Marienbad, Carlsbad, or Ems. I am profoundly impressed with the value of electricity for this condition both in the form of general faradization and the intrauterine use of the faradic current. Not only will the muscular tone of the uterus be improved by this means, but the entire pelvic circulation will be favorably affected. I have seen some cases which seemed to be benefited by the use of astringents and stimulants to the interior of the uterus, also by moderate dilatation, but the same means have also been successful in exciting violent inflammation, which leads me to be cautious in recommending them.

The systematic use of laxatives will be required in almost every case, and we should look well to the condition of the heart, using suitable tonics as they are indicated. The internal use of iodide and its compounds has not been attended with the success which its early advocates would lead one to expect. Worthington approves highly of hydrotherapy, especially sea-bathing. Warm baths are, of course, to be avoided. As Worthington has suggested, it is not improbable that one who succeeds in relieving a patient of her obesity will, at the same time, cure her sterility, even without intrauterine medication, and this opinion is shared by Roubaud.—*Medical News*, Feb. 18, 1888.

Erythrophlœin.—This African product has been the subject of a lively debate in the Berliner Medicinische Gesellschaft (*Berliner Klin. Wochenschrift*, 1888, March 5, also February 27). Dr. Lewin asserted that it possessed a local anæsthetic action far stronger than that of cocaine. Professor Liebreich replied that the sample examined by Dr. Lewin was in reality a snake poison, and that the rosy red coloration produced by evaporation with sulphuric acid is shown also by snake poison, and even by dried egg or serum-albumen. Dr. Schöler read a paper at the last meeting of the above Society, in which he confirms Lewin's results. An erythrophlœin solution of $\frac{1}{8}$ per cent. strength, when dropped into the eye gave rise to a good deal of irritation at first, but perfect insensibility of the cornea ensued in about twenty minutes (or half an hour). The pupil was not affected and intra-ocular pressure was lowered, but a slight degree of hyperæmia of the conjunctiva persisted for a long time, and the subject of experiment complained of a feeling of weight in the upper lid, a sensation as of a veil before the eyes, and of interference phenomena—for example, colored rings. On the other hand, Dr. Loewenhardt, of Breslau, writes in the *Berliner Klin. Wochenschrift*, (March 5), to the effect that he obtained no anæsthesia, but a considerable degree of hyperæsthesia, after subcutane-

ous injection in animals, and found that he could easily produce sloughing. Dr. Epstein, of Nürnberg, in an original communication to the *Centralb. f. Klin. Med.* (March 3), finds that erythrophlœin has only a slight local anæsthetic action when subcutaneously injected, and that a good deal of pain is caused by it. So far then this last observer is opposed to Dr. Lewin, who said in his communications to the Berliner Med. Gesellschaft that erythrophlœin had a marvellous power of producing anæsthesia. The difference of opinion evolved by this statement has had the effect of bringing a number of experiments upon the field of action and no doubt precise results will soon be afforded from uniform samples of erythrophlœin. — *British Medical Journal*, March 10, 1888.

ACUTE IDIOPATHIC MYOSITIS.—DR. E. WALTHER, gives a collection of cases of acute suppurative myositis (idiopathic) and a consideration of the pathology of the affection. He classes it among the severer inflammatory affections, peritonitis, osteomyelitis acuta spontanea, pseudo-erysipel. It is a disease of mycotic origin, and, as investigations of Rosenbach show, is due to the agency of the staphylococcus aureus and albus, and streptococci pyogenes. The avenue of penetration of the infectious element into the muscle is not clear in all cases, but there are conditions as severe muscular exertion, contusions, etc., which predispose these structures to the reception of these micro-organisms. Dull, severe, increasing pain, inability to use the affected muscle, swelling of the muscle and extreme tension are among the principal symptoms. One or many abscesses may form. The prognosis differs, in some cases threatening the life of the patient. Of nineteen cases collated eight ended fatally. If the patient recovers and the abscess has not been large the use of the affected muscle is gradually recovered. The most frequent complications were erysipelas and tuberculosis of the lung. The author brings forward nothing new as to pathology of the affection, quoting largely from Rosenbach. The treatment is an antiseptic treatment of suppurating areas. — *Zeitschr. f. Chir.*, Bd. XXV, Hft. 3.—*Annals of Surgery*, March, 1888.

COLD OF THE HEART.—LUTON says that a gorged condition of the heart is the salient symptom of an impression *a frigore*, which is manifested anatomically by inflammatory and plastic lesions. The clinical symptoms are painful spots over the chest, precordial anxiety, a sense of constriction, and a dry, fatiguing cough. The sequel of this condition is a muco-purulent catarrh of the bronchial tubes, which corresponds to the crisis of this indefinite ailment, which is then called a "cold." The effect of digitalis in aborting these attacks before they have reached this stage, shows clearly that the cardiac muscle is at fault.—*London Medical Recorder*, Feb. 20, 1888.

LAPAROTOMY FOR INTESTINAL OBSTRUCTION DUE TO GALL-STONE. — MR. CHARLES STONHAM has recently performed laparotomy in a case of intestinal obstruction, and found a gall-stone firmly impacted in the ileum, about twenty inches above the ileo-cæcal valve. The stone was removed by a longitudinal incision about one inch in length, and the wound closed with a double row of fine silk sutures. There was recent peritonitis of the gut above the stone, but none below. The patient, a lady aged 66, who was very prostrate at the time of the operation, died fifteen hours later. Symptoms of obstruction had lasted forty-eight hours.—*Lancet*, Feb. 11, 1888.

PERCHLORIDE OF IRON.—To prepare a reliable soluble saccharide of iron M. TRAUB recommends the following process: Dissolve 100 grammes of perchloride of iron in 500 grammes of water. In another vessel dissolve 85 grammes of bicarbonate of sodium in 500 grammes of water. Mix the solutions, collect and dry the precipitate, which is then ground down with 100 grammes of powdered sugar, previously mixed with 1½ grammes of caustic soda dissolved in three grammes of water. The mixture is dried in a stove and powdered.—*London Medical Recorder*, Feb. 20, 1888.

ACTION OF BOILING WATER ON TYPHOID BACILLI. —WILCHUR, of St. Petersburg, has found that when a volume of boiling water equal to that of a gelatine culture of typhoid bacilli is used on the culture the bacilli are only partly destroyed, and that when the volume of water is double that of the culture all the bacilli are killed. Experiments on the dejecta of typhoid patients showed that when four times the volume of water was added to the dejecta, the bacilli were invariably destroyed. It seems, then, that this is an easy and certain method of disinfecting typhoid stools.

SALICYLATE OF MAGNESIUM IN TYPHOID FEVER.— HUCHARD says that this salt is easily prepared by dissolving salicylic acid in distilled water, and saturating the boiling solution with carbonate of magnesium, when the salt forms in colorless and odorless crystalline needles, readily soluble in water and alcohol. Huchard gives the salt in doses of gr. 40 to 80 a day. It is not contraindicated by diarrhœa, since even in large doses it is but slightly laxative. It seems to act as an antipyretic and as as intestinal antiseptic. —*Rev. Gén. de Clin. et de Thérap.*, Jan. 26, 1888.

MARSON'S NEW TEST FOR SUGAR IN URINE,— Dissolve 10 centigrammes of pure ferrous sulphate in 8 cubic centimètres of urine by the aid of warmth; add 25 centigrammes of caustic potash, and boil. A dark green precipitate forms if sugar be present, and the supernatant liquid is reddish brown or black, according to the amount of sugar. When sugar is absent, the precipitate is greenish-brown in color, and the liquid is colorless.—*London Medical Recorder*, Feb. 20, 1888.

THE
Journal of the American Medical Association.
PUBLISHED WEEKLY.

THE EDITOR OF THIS JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

SUBSCRIPTION PRICE, INCLUDING POSTAGE.
PER ANNUM, IN ADVANCE.....$5.00
SINGLE COPIES.....10 CENTS.

Subscriptions may begin at any time. The safest mode of remittance is by bank check or postal money order, drawn to the order of the undersigned. When neither is accessible, remittances may be made at the risk of the publishers, by forwarding in REGISTERED letters.

Address
JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 65 RANDOLPH STREET,
CHICAGO, ILLINOIS.

LONDON OFFICE, 57 AND 59 LUDGATE HILL.

SATURDAY, MARCH 31, 1888.

OPERATION FOR ABSCESS OF THE SPLEEN.

It is seldom that affections of the spleen come into the hands of the surgeon, and on this account, as well as its somewhat remarkable character, a case of abscess of the spleen, operated on by DR. CARL LAUENSTEIN, of Hamburg, and reported in the *Deutsche medicinische Wochenschrift*, No. 51, 1887, is very interesting, and so far as we can ascertain no similar case has been reported in medical literature.

The patient operated on was a coppersmith, 23 years of age, who was admitted to the medical wards of the Seaman's Hospital of Hamburg on September 17, with a diagnosis of typhoid fever, after he had been sick 14 days. He was in a febrile condition, pulse 96, tongue red at the edges and white in the middle, had been suffering with diarrhœa, and the abdomen was somewhat tympanitic. Splenic dulness was much increased, extending in the axillary line from the lower border of the fifth rib forwards and downwards to the free border of the ribs, and backwards to within a finger's breadth of the spinal column. From the middle line forwards it encroached upon the region of normal cardiac dulness, and over the somewhat enlarged dull region of the left lobe of the liver. The spleen was not palpable through the abdominal wall, since the patient did not use the diaphragm in respiration, and during inspiration there was some retraction of the epigastric region instead of abdominal expansion. The patient complained of pain in the splenic region, though there was no sensitiveness on pressure. There was no pulmonary abnormality, except an unusually high position of the diaphragm on the left side, and some friction sounds at the boundary of the base of the left lung.

Under a fluid diet, wine and hydrochloric acid internally, and the pack externally the patient's condition was not materially changed. The temperature fell in the morning, and in the evening rose to 39° C. Three days after entering the hospital the patient had a severe chill, with a rise in temperature to 40° C., very small pulse, 128, and cyanotic lips. He then complained of increased pain in the splenic region, the dulness of which was not increased forwards and downwards, but above and behind was markedly increased. The dulness reached two fingers' breadth above the angle of the scapula, and had an extent of 35 by 18 cm. With the exception of the fixed condition of the diaphragm, and the marked friction sound at the lower border of the left lung, there was no abnormal condition of the thorax. On the day after the chill there was severe collapse, with a fall of temperature to 35.4°, small pulse of 72, and coldness of the extremities, from which the patient was aroused only by the use of stimulants and heat. As the pain in the splenic region continued after the chill, Lauenstein concluded that there was a purulent collection in the spleen, and on the fifth day after the patient entered the hospital he operated.

After the patient was anæsthetized the needle of the Dieulafoy's aspirator was inserted in the eighth interspace in the axillary line, at the point of spontaneous pain, and about the middle of the anterior portion of splenic dulness. The needle was pushed perpendicularly downwards about two fingers' breadth, but no fluid was obtained till it was carefully withdrawn about 2 cm., when a small quantity of chocolate-colored fluid escaped, which had a penetrating fœtid odor. The needle was kept in place and, in order to empty the abscess thoroughly, about 10 cm. of the ninth rib were resected, this rib being selected in order to avoid wounding the pleura. In order to avoid hæmorrhage the thermo-cautery was used to cut down under the resected rib, and parallel to it. Though the spleen was lying close to the diaphragm it was not adherent to it at the point of incision. After the cautery was carried down about 2 cm. into the spleen a chocolate-colored fluid welled up by the side of the cautery. The incision in the spleen was now widened to the extent of the resection of the rib, and the borders of this incision brought up against and fixed to the wall of the thorax by means of hooks.

The finger introduced into the wound showed the presence of a cavity, about as large as a goose-egg,

the walls of which were friable, and in which several loose fragments of tissue were found, that were removed with forceps. The cavity was washed out with cold salicylic acid solution, and then tamponed with iodoform gauze; the whole wound was then covered with an antiseptic dressing. Microscopic examination of the pus showed that it was composed of pus-cells mixed with some red corpuscles, fatty acid crystals, and hæmatoidin crystals. It was impossible to find either pus cocci or typhoid bacilli in dried preparations of the pus. The dressing was renewed on the fifth day after the operation, when it was seen that the spleen was adherent to the thoracic wall and to the diaphragm. Splenic dulness was at this time much lessened. For several days after the operation the temperature was about normal, but then rose, and the subsequent course of the illness was that of a case of typhoid fever. On October 11 the patient was entirely free of fever, but had the characteristic paleness and emaciation of typhoid fever, as well as the ravenous appetite of the convalescent. At the middle of October the cavity in the spleen had granulated well, and the wound in the thorax was almost cicatrized. When the patient left the hospital on November 5 the area of splenic dulness was about 16 × 11 cm.

It is likely that this abscess was embolic, and it is known that embolic abscesses are most frequent in the course of the infectious diseases. Without operation the course of such an abscess could scarcely be otherwise than to a fatal termination from rupture and purulent peritonitis, or rupture into the pleural cavity. Lauenstein thinks it probable that in his case the abscess was one arising in the course of typhoid fever. Clearly the most rational and best surgical treatment was that adopted by Lauenstein. For the treatment of such abscesses we must draw conclusions from the results of treatment of abscesses in other internal organs, especially in the liver. The best results in abscess of the liver have been obtained, not by punction, but by free antiseptic incision, according to Lauenstein, who gives the mortality of the Lindermann-Landau and Volkmann operations as 4.7 per cent. It is true that Barbieri and Parzewski cured two cases of abscess of the spleen by puncture and aspiration, but in both these cases the splenic enlargement and the abscess was accessible through the abdominal wall, which was not the case in Lauenstein's case. Two important steps in the operation reported must be noted: 1. Puncture before the incision, by which the danger of an escape of the putrid contents from the over-full cavity was avoided; 2. Leaving the canula in the abscess until the opening was completed, so that it served as a guide for the farther opening. Finally, it must be regarded as a wise provision of nature that fixed the diaphragm so completely during the progress of the case, and before the operation. Had the diaphragm continued its work nothing is more likely than that the abscess would have been ruptured, and the contents extravasated. So also, the circumscribed pleuritis at the base of the left lung was of no small consideration, since it caused adhesion between the costal pleura and diaphragm, without which the operation, by opening the left pleural cavity, would have much complicated matters.

Launstein gives the following points in the diagnosis of abscess of the spleen, besides the presence of an infectious disease, the changes in temperature, rigors, etc.: 1. Enlargement of the area of dulness. 2. Spontaneous painful sensations. 3. Inflammatory phenomena in the region of the spleen (basal pleuritis and fixed position of the diaphragm). As for fluctuation, this could be detected only in cases in which the enlargement was apparent below the free border of the ribs.

COMMEMORATIVE MEDAL OF THE NINTH INTERNATIONAL MEDICAL CONGRESS.

We are pleased to announce to the subscribers interested that the dies for the "Commemorative Medal of the Ninth International Congress," have been completed. A beautiful specimen, in bronze, struck from one of them is now before us. It is finished in the best style known to the medalic art, and is also creditable to the Congress and the artist.

The medal represents a group of five figures draped in classic costume, as shown in the seal of the Congress, the chief figure of which is Æsculapius, the Greek physician, who is seated and prescribing for an infant. The mother of the child, who holds it in lap, is also seated. The two other figures are men standing, the one supporting himself upon a crutch, the other with a bandaged head, resting upon a staff awaiting the advice of the physician. The inscription or legend upon the face and around the medal is as follows: In a straight line beneath the group of figures just described, is "Washington, 1887." Above and surrounding the figures, reading from left to right around the margin, "International Medical Congress;" reading from left to right and around the margin, "N. S. Davis, Pres.; J. B. Hamilton, Sec. Gen.; E. S. F. Arnold, Treas.; J. M. Toner, Reg." On the obverse is a noble head of Washington,

encircling above it the words, "United States of America," and beneath it, "Founder of the Republic."

We take the liberty of stating on our own responsibility that the money subscribed for the medals has been entirely exhausted in their preparation, leaving nothing to pay postage on their delivery. We would therefore respectfully suggest that each subscriber for a medal send to Dr. J. M. Toner, 615 Louisiana Av., Washington, D. C., 15 cents, in stamps, to pay the postage on his medal, and not allow Dr. Toner, who has already spent so much time on the work, to advance the amount from his own pocket.

PREVENTION OF DIPHTHERIA.

Dear Sir:—In your editorial of March 17, 1888, "Public Wealth vs. Public Health," page 334, you refer to diphtheria as "a preventable disease." Will you not kindly publish the formulæ for preventing diphtheria in your next issue, and oblige

A MEMBER.

The writer of the editorial referred to in the above paragraph from our correspondent, used the word "preventable," as applied to diphtheria, in the same sense as it is used by nearly all writers on vital statistics and contagious and infectious diseases, *i. e.*, by assuming the practicability of preventing the development and diffusion of the specific infection from which the disease is supposed to originate. This is sufficiently obvious from the tenor of the article itself. Any disease is preventable in direct proportion to the correctness of our knowledge concerning its essential causes and of our ability to either prevent the development of those causes or to render the human system insensible to their effects. Thus, small-pox is preventable either by avoiding contact with its contagion or by rendering the system insensible to its action by previous vaccination. But diphtheria, erysipelas, cholera, yellow fever, and some other diseases, evidently depend upon specific infections developed outside of the human body, and capable of being introduced into it in connection with the air we inhale or the food and drink we take. Hence, our formula for the prevention of diphtheria does not consist of drugs to be obtained at the apothecaries', but of an abundance of pure air, good water, wholesome food, clean soil, and a clean personality.

INHALATIONS OF CO_2 IN DYSPNŒA.—DR. EDWARD WEIL, says *La Semaine Médicale*, of March 7, 1888, has used inhalations of carbonic acid gas to relieve and prevent paroxysms of dyspnœa and with favorable results. He thinks that the good effect is due to the abolition of reflex sensibility of the pharynx and larynx. The patient is made to inhale the gas for from two to five minutes, once or twice a day, in quantities of from two to four litres. When the inhalations are made during an attack the dyspnœa is cut short, and the patient breathes easily and comfortably. When the gas is given between the attacks, inspiration becomes more free, and the attacks are prevented, or else diminished in frequency, intensity and duration.

SMALL-POX DECLINING AT SAN FRANCISCO.—The weekly abstract of Sanitary Reports, from the office of the Supervising Surgeon-General of the U. S. Marine Hospital Service, for March 23, 1888, states that only 16 cases of small-pox, and one death, had been reported as occurring in San Francisco from the 1st to the 15th of March.

The medical officers in charge of the Marine Hospital Service at Key West, reports no more cases of small-pox on that Island, under date of Mach 15, 1888. The disease is also reported as having disappeared entirely from Santiago de Cuba. But it still lingers in Havanna, 29 deaths having taken place during the week ending March 10, 1888.

THE CARTWRIGHT LECTURES of the Alumni Association of the College of Physicians and Surgeons, of New York, will be given on Thursday evenings, March 29, April 5, and April 12, at 8.30 P.M, by Prof. William H. Welch, of the Johns Hopkins University on "The General Pathology of Fevers."

EXECUTION OF CRIMINALS.—At a meeting of the New York Medico-Legal Society, on March 16, 1888, a committee reported on the best methods of executing criminals, giving preference to "death by the electric current." The report was adopted by the Society.

THE DISTRICT MEDICAL SOCIETY OF CENTRAL ILLINOIS will hold its next regular meeting at Pana, Ill., April 24, 1888. An interesting programme of work is promised. F. B. Haller, M.D., Vandalia, President; J. H. Miller, M.D., Oconee, Secretary.

ASSOCIATION ITEMS.

A SECTION OF RHINOLOGY AND LARYNGOLOGY PROPOSED.—To the members of the American Medical Association who are interested in Rhinology and Laryngology, I desire to give notice that it is my intention to offer an amendment to the Constitu-

tion of the Association at the next annual meeting, viz: To establish a separate Section of Rhinology and Laryngology in the Association; in other words to separate Rhinology and Laryngology from Ophthalmology and Otology. Yours, etc.,

CARL H. VON KLEIN.

SOCIETY PROCEEDINGS.

CLINICAL SOCIETY OF MARYLAND.

Stated Meeting, February 3, 1888.

DR. WM. H. WELCH described the

PATHOLOGICAL ANATOMY OF INFECTIOUS PLEURO-PNEUMONIA OF CATTLE.

He said the subject was an interesting one aside from its pathology on account of the economic interest it bore to stock raisers and dairymen. It prevails in this country extensively and large sums of money have been appropriated to stamp it out. If it is not checked it is bound to cause greater loss as time goes on. It has doubtless existed from remote times but only in the last two centuries has its description been accurately carried on. It prevails in this country chiefly in localities east of the Alleghanies. New York and Brooklyn representing one center and Baltimore another. So far it has never gained a firm foothold west of the Alleghanies. The disease is a contagious one, not spontaneous so far as is known, and always due to infection. The period of incubation varies from three weeks to three months and it may be as long as six months. The onset is insidious. The animal begins to cough, its temperature becomes elevated, with loss of appetite, etc. Often much can be determined by physical signs when practiced by experienced hands. Sometimes these acute symptoms subside and the disease passes into a chronic state. Again it may run a latent course and it is then not easily recognized. The disease is a fatal one with an average mortality varying from 30 per cent. to 50 per cent. The distinguishing feature in the normal anatomy of the lungs of cattle is the connective tissue around the lobules. It is not abundant, but characterized by the looseness of its meshes. If the animal dies in the early stage of the disease we find in the lung one or more foci of inflammation. Sometimes the whole lung becomes affected. The affected portion is consolidated; more or less of its elasticity is lost and it is friable. The pleura is always affected and in some cases a well-marked pleurisy is observed. A cut section shows a variety of appearances. Not only are the lobules affected, but the interstitial tissue also. Some lobules may be red, some gray, others dark, etc., and moving through this are bands of tissue. The early stage of the disease is marked by œdema, later it is red, and still later the appearance is gray. The interlobular tissue appears as broad bands due to its infiltration with serum and fibrin. The small bronchi are inflamed in the immediate vicinity of the inflamed area and contain muco-pus and fibrin. The microscope shows that the air cells are filled with the ordinary products of inflammation. In the interlobular tissue the lymph spaces are filled with large blocks of fibrillated fibrin. Emigration of white corpsucles does not penetrate deep into the interior. They are found to undergo coagulation-necrosis.

As regards the termination of the disease there is no proof that the lung ever reaches again its normal state. Sequestra form in the areas of inflammation and fresh pleuro-pneumonia may set up from these. The formation of these sequestra always takes place in the interlobular tissue and bands of tissue run into these which correspond to the bronchi and blood-vessels. The sequestrum may disappear by invasion of granulation tissue from the outside and the exterior becomes peculiarly worm-eaten in appearance. There is no proof that the disease affects other organs than the lungs.

The disease is infectious beyond all doubts. A great many have described organisms and this is the most sensible hypothesis. It has never been produced artificially. The materie morbi as yet is open to investigation.

During the course of his remarks Dr. Welch illustrated the points he made with some very beautiful specimens of the disease in its different stages.

DR. PATTERSON, in response to an invitation from the members of the Society, said that he was unable to go into discussion very deeply because Prof. Welch had brought out all of the points of interest pertaining to the disease in question. He did not believe there was any way to eradicate it except by destroying the animals. The subject is such an important one that National legislation should be directed to aid in its suppression.

DR. L. MCLANE TIFFANEY asked if the droppings from an infected herd would cause infection in other herds should they come in contact with it.

DR. WELCH said the disease may be transmitted without contact. There is a singular insusceptibility to the disease in some cattle. An animal may be carried to a place and no disease develop. He thinks too that it is necessary to have a National law to eradicate it. National and State laws sometimes coöperate to that end, as in Maryland, for example. Destruction of the animal is the only way to destroy the disease.

DR. PATTERSON, in reply to a question, said that he had not experimented with the milk of animals affected with pleuro pneumonia and therefore he could not say whether the disease could be transmitted in that way or not. One thing, however, the milk does not secrete in the acute stages and therefore it does not get into the market. Meat in the acute stage is dangerous.

Stated Meeting, February 17, 1888.

DR. W. P. CHUNN, of Baltimore, read a paper on

A NEW SUTURE IN CÆSAREAN SECTION.

The very short paper here presented is to call attention to a method of suturing designed to be used

to close the incisions made during Cæsarean section. So far as I know it is original and it is left to the Society to judge of its usefulness. In regard to the details of the operation I have a suggestion to make which I think might shorten the time required and prove of great advantage. We know that many patients die of shock on account of length of time, etc., some of septicæmia, etc., septic trouble being produced by escape of fluid from the uterine wound into the peritoneum. The escape of fluid is found to occur by reason of shrinkage of the uterine tissue and consequent loosening of the sutures and gaping of the uterine wound. I offer then as a suggestion and for what it may be worth, the following method of using the same row of sutures for both abdominal and uterine wounds, and thus lessening the chances of shock and septicæmia.

The uterus having been evacuated I would if necessary sew up the upper angle of the abdominal wound in the ordinary way *until* the abdominal wound and the uterine wound were both of the *same length*, then by introducing the ordinary suture through one lip of the abdominal wound, then through the corresponding lip of the uterine wound and crossing over and passing the sutures out through the other lip of the uterine wound, and then out through the corresponding side or lip of the abdominal wound we would obtain a single row of sutures which it seems would close both wounds effectually. The sutures should be entered one-half to three-fourths of an inch from the margin of each wound. In this way the suture being secured a strip of parietal peritoneum comes in contact with a strip of uterine peritoneum along the whole length of the uterine wound, on both sides of the incision, and then the peritoneal cavity is shut off from the uterine discharges. In addition to the adhesive inflammation surrounding the uterine wound we would have parietal peritoneum pressing directly upon the closed uterine incision.

That there are some advantages in this method cannot be denied. The question remains for decision, however, whether the disadvantages will not counterbalance the advantages. There would certainly be a great saving of time and labor as one row of sutures can be put in much more quickly than three rows. If any fistula resulted the discharge would occur outside of the peritoneal cavity.

Any resection of muscular tissue for the purpose of bringing in contact opposing surfaces of peritoneum would be avoided. Surgical shock would be diminished and the operation greatly simplified. The ends of the sutures being outside the abdomen could be lightened as occasion might require. Let us now consider the disadvantages.

1. Would there be sufficient traction exerted to cut out the sutures? I think not. We know that a retroverted uterus may be dragged up out of the pelvis and stitched to the abdominal peritoneum and continue in position. The abdominal walls admit of sufficient *depression* to form firm adhesions about the cervix after an extra peritoneal stump is left behind. This fact shows how depressible the abdominal walls are. Immediately after labor the uterus is at least eight inches in length. At the end of a week it is six and a half inches in length; so that we can see the relaxed abdominal walls about the upper angle of the wound would only have to sink in an inch and a half during *seven days*. If the parts should remain in contact so long union would be complete. If a fistula should occur in all probability the discharge would flow outside of the abdomen. We know many cases of cattle-horn laceration have gotten well not only without any fistula, but without any stitches having been inserted whatever.

The uterus would not remain permanently elevated any more than a supra-vaginal cervix after an extra-peritoneal hysterectomy. The writer was induced to make these suggestions by watching the results of a similar operation on the bladder where the whole length of that organ was cut open during an exploratory laparotomy for a fibroid tumor of the uterus. The bladder and abdominal walls were stitched together with one row of sutures as already described in such a manner that the two layers of peritoneum stuck fast together, thus preventing a single drop of urine escaping into the peritoneal cavity. Theoretically there would seem to be no objection to the operation as described. To be demonstrated or practical it will have to be tried.

MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Stated Meeting, November 23, 1887.

THE PRESIDENT, JOS. TABER JOHNSON, M.D., IN THE CHAIR.

DR. I. W. BLACKBURN presented a case and specimen of

SARCOMA OF THE SUPRA-RENAL CAPSULE.

(See p. 389.)

DR. SCHÆFFER asked Dr. Blackburn if there was any pigmentation of the skin?

DR. BLACKBURN: There was only a slight yellowish tint of the skin, which he thought was due to the jaundice from the obstruction in the gall-bladder.

THE PRESIDENT: Could the tumor have been removed during life?

DR. BLACKBURN saw nothing to prevent it except the adhesions. The blood supply of the tumor was through very small vessels.

DR. SCHÆFFER would call attention to the weight of the tumor, which is one and one-half times as great as that of the liver. It would be interesting to know whether the mental disease was merely coincident or based on the origin of the tumor. He thought there was some connection between the mental state and the growth.

DR. LAMB: His own experience with such tumors is that they do not give rise to any well-marked symptoms, and there is an absence of pain. Pigmentation is also absent. Where the capsule has undergone cheesy degeneration we find pigmentations of the skin.

DR. SCHÆFFER: It is not rare to find cancer of the capsules coexisting with Addison's disease.

DR. EDES: As to the matter of pigmentation, he had occasion several years ago to look up the subject. A young man consulted him after a distinguished English physician had diagnosticated Addison's disease, and he accepted the diagnosis. He did not have the characteristic bronze pigmentation. His skin was dark, but he was of a dark-complexioned family, and was also said to have been sunburnt. He thought the man had Addison's disease up to the last, but there were no decided symptoms. The post-mortem showed that every organ in the chest was cancerous. Both capsules were also diseased. He thought the absence of pigmentation in Dr. Blackburn's case was not due to the character of the disease, but to the fact that it was confined to one capsule.

DR. BLACKBURN thought the hæmorrhoids were due to the disturbance of the portal circulation.

DR. D. S. LAMB presented a case and specimen of

BONE SYPHILIS.

Colored man, æt. 42. Had been sick for years. Was in Freedman's Hospital several times for long periods. Had enlargement of liver and dropsy; cough; vomiting and diarrhœa; jaundice; severe, persistent headache. Died November 1, 1887.

Necropsy by Dr. Lamb: Emaciation extreme. Right inguinal glands enlarged and indurated; external genitals normal.

Vault of skull thick and showed many small gummata, which had caused absorption and exostosis. Scalp and dura mater both closely attached to calvarium. Brain 50 —, normal.

Lower incisor teeth irregular, but no "syphilitic" teeth. Mouth, throat and larynx normal, except several minute abrasions on under side of epiglottis. Tonsils atrophied.

Heart 8 ozs., irregular patch of old pericarditis on right ventricle; slight atheroma of ascending aorta. Several anterior mediastinal glands enlarged, hard, pigmented and contained grayish foci not softened. Firm old pleuritic adhesions on both sides. Right lung 29 ozs., upper lobe œdematous. Left lung 14 ozs. lower lobe contained grayish nodules indefinitely outlined.

Stomach small, mucous membrane smooth. Intestines also appeared atrophied. Liver 34 ozs., appeared normal. Spleen 3½ ozs, pale, thickening of capsule. Right kidney 5 ozs; left 7 ozs. Bladder and prostate normal. Iliac, lumbar and lesser omental glands enlarged, firm, and with grayish foci.

Sections of lung and kidney and pericranium have been set aside for microscopical examination, but I do not think there is any doubt of the case being syphilitic. The nodules in the lung may prove to be tubercular. The enlarged liver had been reduced, I presume, by the iodide treatment. The enlargement of glands in the right inguinal region began while the patient was confined to his bed in hospital, and a careful examination then failed to find any venereal sore; nor was the post-mortem examination any more satisfactory in this respect. Nevertheless, quite an extensive chain of glands in the iliac and lumbar regions was found diseased, as also in the anterior mediastinum. All of this suggests syphilitic infection acquired except the apparent absence of the primary sore. It may be that the bone disease was from the congenital transmission, though I believe such cases are rare. And it is said that a person already showing evidence of syphilis cannot acquire the disease. Altogether the case has been interesting to me, as well as puzzling.

DR. JOS. TABER JOHNSON reported

THREE CASES OF OVARIOTOMY; TWO DOUBLE AND ONE SINGLE.

(See p. 386.)

DR. LAMB would like Dr. Blackburn to give his experience in examining skulls with reference to syphilis.

DR. BLACKBURN has seen very few well-marked syphilitic cases. In 225 skulls examined he had not seen one with the characters shown by the specimen presented to-night. He had frequently seen syphilitic nodules of bones.

In reply to a question by DR. KING as to what doses of potassium iodide were given in the case presented? DR. LAMB said that 20 grains were given three times daily.

DR. KING believed in very large doses. He began with 10 grains and increased the dose daily until it reached 300 grains, if necessary.

DR. FRIEDRICH had followed the plan mentioned by Dr. King until his patient took 1 Troy ounce a day.

DR. KING had heard Dr. Hammond say, in a lecture on anatomy delivered at the University of Vermont that a man with syphilitic epilepsy was so accustomed to the potassium iodide that he bought 12 pounds a week.

DR. CALDWELL had treated a man for syphilis who finally went to the Hot Springs. Upon his return he stated that he had been taking 1 ounce of the potassium iodide daily, and he was apparently cured.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, December 16, 1887.

THE PRESIDENT, W. T. BELFIELD, M.D., IN THE CHAIR.

DR. J. G. KIERNAN read a paper entitled:

CAN A SANE MAN BE CONFINED IN AN ILLINOIS INSANE HOSPITAL?

He discussed the self-contradictory character of the Illinois insane commitment law, and pointed out that under it the brother-in-law of one of the boodlers, without having been legally committed, had been placed, while sane, in the Cook County Insane Hospital, whereupon the Warden, H. H. Varnell, and the Superintendent, Dr. J. C. Spray, had certified to his insanity and presence as a patient of the institution. Such certificates were subsequently used to defend the aforesaid individual from the consequences of a criminal seduction. Dr. Kiernan pointed out that attendants guilty of perjury at the

1885 investigation were retained in the Insane Hospital, and such persons would be excellent tools in the hands of unscrupulous people to prove sane people insane. He urged the Society to assist the State Society in securing the abrogation of the present absurd and brutal law, and to assist in securing State supervision of all places where the insane were kept.

DR. N. S DAVIS: So far as the paper is concerned, I have no knowledge of the facts. As for the Illinois law for the commitment of the insane, I have had but one opinion since it was enacted. It has seemed to me one of the most unnecessary laws; unjust, and injudicious for the accomplishment of its objects. The object being to prevent the commitment of sane persons to insane asylums and keeping them there, I think it would puzzle any intelligent physician conversant with the insane and with the ordinary proceedings of courts and juries to tell wherein there is the least degree greater security with this law than there is with the ordinary laws that exist in almost all other civilized countries in regard to the commitment of the insane. There are a large number of the insane that are totally unfit to be taken before a jury or in a public court and confronted as the law requires, and in order to avoid it the judge must evade the law. The idea of taking a woman in puerperal or childbed insanity to a public court; under intense excitement and in a physical condition where the most humane thing that could be done would be to secure for her quiet and seclusion, is revolting to every sane mind. The process the law requires is so utterly repugnant to their sense of justice that some judges have evaded it by instituting private examinations of the parties at their homes. But the law should not be drawn in such a way that humanity requires it to be evaded.

I had the misfortune to have a young lady under my care not many months ago, who was brought here from another State in hopes that she would be relieved by taking her away from home. But instead of being benefited she became more decidedly and excitedly insane. Her friends here found themselves in a dilemma. Her mother brought her here to the house of relatives, and instead of getting better she had become decidedly worse, requiring the most vigilant care day and night, so they began to look about to see how they could secure her and relieve themselves, and they came to me for advice and wanted to know if there was not some private institution that she could be taken to? I told them there were certainly institutions and, so far as I knew, perfectly reliable ones, as well as State institutions; but they would be obliged to go before a court and have her go through the form of a trial and be recorded in court as convicted of insanity. That idea stands directly in the way of a great many of our best citizens who unfortunately have a member of the family become insane. It is regarded, whether rightly or not, as put upon record for the inspection of the world and all future time; and such a verdict of insanity is regarded by a large class of intelligent people as a bar or hindrance to perhaps the most desirable prospects and chances in life, and they rebel against it and ask us, What else can we do?

I said to these people: There is no other way known to me but to take her out of the State just as you brought her in; you will have to take the risk and take her away or leave her where she is. They made preparations to take her to an institution near Cincinnati, to avoid our law. And I have known of not a few cases taken out of the city quietly because people will not submit to that procedure which increases insanity sometimes to a dangerous extent. I think if that delicate girl had been taken to the court-room and confronted by a jury, in accordance with the terms of that law, with the incipient indications of meningitis that she was laboring under, it would probably have increased it into complete meningeal inflammation and probable death within a week. But, fortunately, the case terminated more favorably. The family kindly consented to have her remain where she was and each to do what they could. A reliable nurse was obtained, and the mother was to take the place of the nurse only long enough for her to sleep. And the nurse and I agreed to do what we could to get the patient well and, having her thus secluded, the young lady in time got well, went home, and is as well to-day as any other girl in her native State.

I give this instance to show that there is absolute harm worked to the insane by this law, which secures no greater certainty of preventing those who are not insane being placed in an asylum, not one whit more than the law of New York or Wisconsin, or a dozen other States, or the laws of almost any other civilized country.

Talking about medical men—three medical men in succession separately examining a case personally and acquainting themselves with it, and going before a magistrate and making oath to the correctness of their statements should certainly be not less reliable than a jury of non-professional men summoned from the street, with but one physician among them. I do not think the profession of this State ought to rest contented until the bad features of that law are removed. If they need a jury law in any case, let it be retained only for such accused parties as may ask for a jury, or whose friends may ask it for them. And then make it a real jury, just the same as any other jury that is deemed competent in a court of record, and not a halfway jury summoned from the street corners. But in all cases where the parties accused or their responsible friends do not ask for a jury, let the same testimony that the rest of the civilized world accepts be considered satisfactory for the State of Illinois, and I think we will have better credit, exercise greater humanity, and secure better results to the insane as well as to those who are not insane.

DR. G. C. PAOLI: So far as Chicago is concerned, I have several times had an opportunity of shaming the injustice of trials for insanity before the courts. I remember the case of a lady whose family physician I had been. She was, though a woman of strong common sense, of an extremely nervous temperament. Her husband wanted her to sign over to him not only their joint property, but also property that belonged to her individually. This she refused to do. The husband then came to my office and said that he wanted

me to go into court to testify to his wife's insanity. I told him that if either of them was insane it was himself and not she. He was displeased at this and told me of a physician who at first decided that she was not insane, but finally, through undue influence, his judgment was reversed and he pronounced the poor woman insane. I gave a history of the case and the woman was adjudged sane. She afterward studied law and has, I understand, been admitted to the bar. In another case a woman married a man who afterwards became infatuated with another woman and wanted to marry her, and in order to get rid of his wife he paid a great deal of money to prove that she was insane. Meanwhile friends who were interested in her case, not receiving notice of her trial, procured another trial and the woman was saved. This shows the loose way in which the business is done. These trials are conducted in a way that is a shame to the State of Illinois. These two women would no doubt be in the lunatic asylum to-day if somebody had not taken an interest in them. The jury that decides these important questions should be composed of physicians, and not of men from the various walks of life, who are not competent to decide on this subject; and sometimes, though there be one physician amongst the jurors, he may not be competent to diagnose a case of insanity.

DR. FRANK BILLINGS: I cannot discuss the subject, but I should like to ask a question of Dr. Kiernan that pertains to the subject. About two years ago, and within the last six months, I have had patients whom it was necessary to send to an asylum. The people were so situated that they did not care to go before a jury, and they were both put in a private asylum. I have been told that should these patients awake to the fact that they had been put in an asylum, those who put them there would be liable for damages.

DR. J. G. KIERNAN: The point raised by Dr. Billings is covered by the Section I have read, that says the person shall be liable to civil and criminal damages, to one year's imprisonment in the county jail and to fine or both, and to suit for civil damages. Another state of things is even more curious: supposing the patient be a case of melancholia who, as frequently happens, recognizes the importance of certain suicidal impulses and desires to place himself under control. Supposing that patient should be put under control at his own request, without a jury trial, and taken to an institution. For doing that thing at the request of the patient any one would be liable to criminal and civil prosecution. The law, it is almost unnecessary to state, was passed at the instance of a paranoia named Mrs. Packard, who had been in the Jacksonville institution. One of those enterprising humbugs who run newspapers went there, was touched by the woman's story, wrote up the case, and there was a great liberation epidemic; yet this woman was rightfully placed under humane laws in that institution. With regard to the case in France of which Dr. Paoli has spoken, I am acquainted with its history. I must confess that I think the man was placed rightfully in an insane asylum. The newspapers have stated the other way, but the newspaper medicine is always absurd. The man was placed there under the authority of one of the most able alienists this age has produced, Legrand du Saulle, one whose dictum has almost as much weight as a law.

Another patient was liberated under almost the same circumstances from an English insane hospital. She has just been sent back to the asylum as, so her newspaper friends say, the result of her dissipation, but really this resulted from her insanity. She was previously reputable.

The law here would not stand the test of the Supreme Court. If a person committed to the asylum should appeal to the Supreme Court he would be set free. The finding of the jury is merely an inquest; an indefinite something is to come but never comes.

In regard to how the juries are constituted I may be permitted to cite one instance: In 1884 there was a man on trial who was clearly insane. A man got himself put on the jury to spite the brother of the patient, and declared a man sane who believed that his brother, while on the witness stand in open court, was forcing compressed air into him with a patent electric apparatus. The verdict was so absurd that the judge set it aside.

Another harshness results under this law: Suppose a man in moderate circumstances has an insane relative, but he cannot afford to pay his board at an insane asylum, that friend must be decided a pauper. On the other hand, the judge may decide that the insane man is not a pauper because the insane man's brother gets $12 a week, although he may have five children to support, and the latter has to pay his board for boodlers to pocket. This is frequently done.

In regard to the case I have stated, the certificates read are all on file in that court, and they can be procured at any time. The case was one in which there was no doubt of the object. While the man was at the institution he was going on the bail bond of two other people, and his mental condition was not questioned; the point did not lie in the fact of his being sent there. Here is an institution that is not visited for years by the supervisors of our State. This institution is under the control, to all intents and purposes, of a set of politicians. Under this, the law, and by aid of the art of "jury-fixing" so commonly used, a sane man, obnoxious to the "boodlers," could be adjudged insane. The vile attendants would swear to his violence and the Superintendent would, judging from the certificates quoted, do the same. The law should be amended to secure privacy in commitment and proper State supervision afterwards.

DR. W. T. BELFIELD exhibited a specimen of the

BACILLI OF INTERMITTENT FEVER,

and said: This specimen is exhibited through the kindness of Dr. William T. Councilman, associate professor of pathology in the Johns Hopkins University. It presents the organisms first described by Lavaran. They are contained in the blood corpuscles that are abstracted from the body of a patient just before, during or after the chill characteristic of

intermittent fever. They are always present at that time, being contained in numerous corpuscles, and are not found except at that period—about the time of the chill. Nor are they found in the blood of individuals who are not suffering from intermittent fever. That, so far as I am aware, is the extent of the investigation that has been made. They are merely characteristic organisms found in the blood corpuscles during the chill of intermittent fever. Of course this does not prove any causal relation of the organisms to the disease; that requires cultivation outside of the body and inoculations with pure cultures. These have not been made; therefore it would not be justifiable to say—and observers do not say—that these organisms are the cause of intermittent fever. But observations are sufficiently numerous to warrant the assertion that these organisms are characteristic of the blood of patients suffering from that disease. In that respect they rank with the spirillium of Obermeier, which was one of the earliest of the organisms observed in the blood.

DR. N. S. DAVIS: Did I understand that they are found only in the blood at the stage of the chill —after the chill disappears, during the febrile stage?

DR. BELFIELD: That is the universal statement of observers. They are present for a short time before and after the chill.

DR. R. H. BABCOCK: Has the effect of the solution of quinine been tried on these organisms?

DR. BELFIELD: Not to my knowledge, in the blood outside of the body. The administration of quinine to the patient, however, causes a rapid and complete disappearance of these bodies from the blood corpuscles.

ST. LOUIS MEDICAL SOCIETY.

Stated Meeting, February 4, 1888.

THE PRESIDENT, Y. H. BOND, M.D., IN THE CHAIR

DR. H. H. MUDD read the history of a case of

FRACTURE OF THE FEMUR, WITH RUPTURE OF THE LEFT FEMORAL VEIN AND ARTERY.

The patient entered the City Hospital at 3.30 P.M., Monday, January 23. Two hours before he fell four stories through the hatchway of an elevator. When brought to the hospital he was suffering from shock: the pulse was weak—130 per minute—respiration shallow—30 per minute; skin covered with perspiration, the extremities, especially the lower, cold; the left thigh was deformed, there being a sharp bend at the junction of the lower and middle third, the thigh was increased in circumference. Above the bend it was exceedingly tense, and could scarcely be indented with the finger. There was a tumor eight centimeters in diameter on the outer surface of the knee, and over the external condyle the parts were discolored, and there was a slight abrasion. Crepitus was felt at the point of deformity; no pulsation could be felt in any artery below the point of fracture; the patient's temperature was 37.4 C. General sensation was much diminished as far up as the knee, and was entirely absent over the foot. The specimen presented shows a complete rupture of the femoral artery about the junction of the lower with the middle third of the bone and near the lower extremity of the femoral artery, just below the point of the complete rupture is a second, extending through one third of the calibre of the artery. The vein shows a longitudinal, irregular laceration, extending across perhaps one-half of its circumference. I think it is a little exaggerated now. It will be seen that the vein and artery were both involved. I find in the International Encyclopedia of Surgery—Ashhurst's, from an article written by Liddell, this quotation. I quote it to show something of the status of the treatment in 1883 and 1886, because I think there is a change in the feeling of the profession concerning the proper treatment:

"Ligation of artery and vein simultaneously for venous hæmorrhage: When a large vein is wounded and bleeding, Professor Langenbeck recommends that, as an hæmostatic measure, the accompanying artery should be tied as well as the injured vein. He believes that when both artery and vein are tied, not only does gangrene not follow, but there is less disturbance to the capillary circulation than when the vein or artery alone is tied." He states that, by simultaneous ligation of both artery and vein. "An equilibrium is maintained between the arteries and veins until the collateral circulation is established. Two observations which I have already presented strongly support these views. One of them was a case related by the late Dr. George McClellan, in which, the femoral vein being lacerated, the femoral artery was ligatured, the hæmorrhage was easily restrained by compression, and the result was successful. The other occurred to Professor Agnew; in it the hæmorrhage from a punctured femoral vein ceased on applying a ligature to the accompanying femoral artery, and did not recur. That gangrene is not an inevitable result, and is but rarely to be expected in such instances, is well shown by the cases of Professor Grillo, of Naples, who included the femoral artery and vein in the same ligature in fifteen cases of aneurism of the ham or lower part of the thigh. These were all successful; while in fourteen other cases, in which the artery was isolated and tied alone, there were two deaths from secondary hæmorrhage."

Again, "The main artery of the lower extremities is rent asunder without external wound much oftener than many suppose."

The indications for treatment in such injuries as that may be summed up under perhaps four heads, and under those four heads I find this statement:

"Compression of the femoral artery at the pubes, from its innocuousness, and the remarkable success which has attended its use, is far preferable to any other plan of treatment; and the surgeon should always make faithful trial of it, when practicable before proceeding to operate with the knife."

2. "The old operation, that is, the ligation of the torn artery itself in the wound, above and below the rent in its tunic, although J. L. Petit performed it with success, is not admissible in cases of simple

fractures. There is no pretext under which a surgeon can justify himself in voluntarily converting a subcutaneous into an open fracture."

3. "Ligation of the superficial femoral artery, at or above the middle of the thigh, as originally recommended and practiced by Dupuytren, is the operation which must be performed in cases of diffuse aneurism, resulting from fractures of the leg that are simple or unattended with external wounds, whenever compression of the femoral artery is impracticable or proven ineffectual."

4. "Amputation at the knee should be performed, without delay, as soon as gangrene appears in the toes or foot belonging to a limb where this accident had occurred; and there is but one circumstance besides gangrene which makes this operation admissible for the lesion in question, and that circumstance is the failure of all other plans of treatment."

From these quotations it would seem that the simultaneous ligation of the artery and vein does not materially increase the gravity of the case, but is rather a mitigating circumstance, and that gangrene is not so likely to follow as if only the artery were ligated. If the vein itself is injured and that alone ligated, the danger is still further increased, from secondary hæmorrhage, and from giving way of the vein. Gangrene had already supervened when I saw the case, forty-eight hours after the accident, I thought possibly we might have the artery in such a condition that it would carry on the circulation and enable us to save the limb even below the site of the fracture. When I made an incision into the part I found a large coagulum of venous blood, and when that was detached arterial blood flowed. After finding the condition of the parts, with injury both to the artery and vein with gangrene already present, we amputated the thigh above the site of injury, and the patient is in a way to recovery. Now what are the dangers to such an injury? First, the danger of primary hæmorrhage, which our patient had already passed. Second, the danger of secondary hæmorrhage. This we should pretty certainly have had in this case, if we had simply waited, as the coagulum, which was a large one, was diffused in the tissues. For when it softened, we should have had the clot in the vessel itself breaking down, and secondary hæmorrhage would have been the result. Now the question comes up, and pertinently I think, whether gangrene is less likely to occur if we depend upon compression, or ligature at a proximal point or a point of election, or when we cut down upon the part and free the tissues and ligature directly at the point of injury immediately. Shall we cut down upon a fracture? With a rupture of the artery, with such symptoms as we had here, I think we are justified in converting a simple fracture unto a compound fracture; that our proper surgical procedure is not to depend upon compression, but to cut directly down upon the injured part and free it from the coagulum to lessen the tension of the part, cleanse it, and ligate not only the artery, but if necessary the vein, thus giving an opportunity for the development of the collateral, circulation. The collateral circulation is more likely to be reëstablished from an injury at one point in the artery than it is at two. Every thing favors this plan of treatment, if we are safe in making it a compound fracture instead of a simple one. We have in the original injury conditions which favor sepsis; we have a large coagulum; we have the sheath of the artery itself dissected away from the coat of the artery by the coagulum which pushes back into the connective tissue and interferes with the nutrition of the artery itself; the tissues of the leg are disturbed in their nutrition, because we have loose connective tissue infiltrated by a dense firm coagulum which prevents free circulation and gangrene supervenes because of the interference with the circulation by the coagulum and the tension of the parts. The injury, if promptly met and treated gives no more reason for gangrene than would the sample ligation of the artery or but little more; it certainly would not if the wound can be maintained in an aseptic condition. Once more I quote:

"In gun-shot severance of the femoral artery with fracture of the femur I believe it is always best to amputate without delay, because gangrene is almost certain to ensue if the limb be not cut off."

It seems to me that with our improved facilities for controlling inflammatory affections about wounds, that we are justified in cases of fracture of the femur with injury to the femoral artery, or any of its large branches, in seeking at once the site of the injury and placing a ligature about it. The collateral circulation is more readily developed than in would be if the ligature had been placed at the site of election above injury. Danger of secondary hæmorrhage is much less than if we trust to compression. Gangrene is much less likely to supervene for, cleaning out the clots, freeing the vessels from pressure we limit the inflammation which is sure to follow such extravasation of blood as we get from the rupture of a large artery. The increased difficulty of ligation at the point of injury should be no bar to the early adoption of this proceeding. Rendering a simple fracture compound is now the lesser of the two evils presented. Compound fractures under present management are very much more innocent of harm than is a ruptured artery treated under the old rules and methods.

I might cite several cases which have come under my personal observation. I once saw a policeman who was shot and the femoral artery severed about the same point as this. The artery was ligated at the site of election above; gangrene supervened and the patient died on the fourth day. I also saw a patient whose axillary artery and vein were both perforated by a bullet, and an aneurism developed; when I saw the patient some days afterwards, I ligated the subclavian artery; a secondary hæmorrhage occurred several days later. I think it was the second or third day after the ligature was placed in position that the patient suddenly suffered a severe sense of oppression with hæmorrhage. Another hæmorrhage occurred later associated with severe oppression of the chest, and the patient died. Making a post-mortem, we found that the vein and artery were both perforated, and ligature placed on the

artery was in proper position, and the secondary hæmorrhage occurred from the axillary vein and not from the artery. The death of the patient was probably from insufflation of air, for the left auricle and a portion of the vena cava were filled with grumous blood—air mixed with the blood; and there was quite an extensive coagulum extending through the heart.

DR. MEISENBACH: There is not a man practicing surgery who may not at some time be brought face to face with the condition which has been described by Dr. Mudd. I have met with only one case that I now recollect in which there was probably a rupture of the femoral artery. This case occurred in a man who was working under a railroad car; a barrel, which had been placed under one end to prop it up, gave way, and struck the man on the thigh. When I saw the patient he presented very much the appearance that Dr. Mudd has described; the leg was shortened, out of line, and there was a bend in the thigh; the thigh was very thick and tense. There was a wound into which I could introduce my finger, and through which a portion of the thigh bone protruded. At the time I examined him I was very much in doubt as to whether there was any pulsation of the tibial artery, and whether the femoral artery was not ruptured. I could not positively determine. I treated the case conservatively, put on a long Lister splint, and applied ice and watched results. After a number of hours I found a distinct but very small beat in the posterior tibial artery. But the circulation became stronger and after a number of days I was enabled to put on a Hodgen splint, and treating the wound as aseptically as I knew how had the satisfaction of getting a very good union of the thigh bone, without shortening. The man is in good condition and has never suffered any evil consequences. I think Dr. Mudd struck the key note in saying that where the artery is involved, where the fracture is such as to leave no doubt as to the rupture of the artery, the simple fracture should be converted into a compound one. Why should the surgeon hesitate to make a simple fracture compound in this case? He is just as much justified in cutting down and making a simple fracture of the thigh a compound fracture as he is in cutting down upon the humerus and wiring the ends of the bones together. There is no greater danger in the one case than there is in the other. The compression at the pubes acts, it seems to me, in the same way that does the placing of a ligament around both vessels at the proximal end; the difference of course being in favor of opening the wound and ligating the vessels at the site of injury. I think Dr. Mudd stated that the man fell out of a window. I think that ruptures and injuries of arteries are very often determined by the direction in which the force which causes the injuries to the artery is applied. Thus an injury which has a tendency to produce an acute bending of the limb at the time of the reception of the injury would be much more liable to injure an artery, that is, drive the bone into the artery, or rub it across the artery in such a way as to cause a rupture, than in a case where the artery would not come into line. Thus any injury which has a tendency to bend the limb at an acute angle would have a greater tendency to drive the bone against the artery in such a way as to rupture it, entirely or partially, and to be followed by rupture in the course of time producing an aneurism or some other condition which involves rupture.

DR. D. V. DEAN: I wish to say only that in such cases as Dr. Mudd has cited, in my opinion, the impropriety would consist in not making the wound an open one, even for explorative purposes, and afterward adopting such procedures as might be found necessary.

DR. BROOME: I rather incline to the conservative practice of surgery, and would like to have seen conservative principles applied in this case. You know it was said of the father of American surgery that he never spilled a drop of blood uselessly. And I think now when occasionally I hear reports read before this Society, that perhaps we ought to return to those principles. I know just how difficult it is to determine what to do under circumstances like those stated by Dr. Mudd. Here is a large, stout man who has fallen and has received a very severe injury; he finds that the skin is immensely tense and everything points to an abundant hæmorrhage underneath the skin; the circulation in the extremity is very feeble, if there is any at all. But I understand that in this case there was some circulation, and I think the circulation was growing stronger. Furthermore, I infer from Dr. Mudd's statement that there was a clot, and that there was no hæmorrhage at the time of the operation. The question is, what would have been the results had he clung to the principle to which I have just referred. I would like to know what he thinks about it himself. In the case of the policeman to which Dr. Mudd referred, the patient was seen immediately after he was shot; of course there was hæmorrhage at that time; but in the case which he saw after three or four days standing, blood-clot had formed and no hæmorrhage, and the bleeding did not occur again until after he cut down upon the part. I would have liked to have seen compression applied in this case, and a conservative course adopted. I think we should be very careful and cautious at all events. I should probably have done just what Dr. Mudd did, had it been my case, still I would like to have the doctor tell us what he thinks would have been the result had a conservative practice been followed in the case.

DR. MUDD: The artery at the point of its rupture is included in pretty firm tissue which forms Hunter's canal, and it is pretty closely fixed to the bone. The artery could not readily elude the bone, and it was cut by the sharp end of the bone fairly across. The conservative surgery of the old authors, of recent authors and of all other authorities, so far as I know, would have suggested, at the time that we saw this case on Wednesday last, and at the time Dr. Broome saw it, that we amputate without further delay. Gangrene was then present, and the foot showed no evidence of a return of circulation. The return of the circulation

was evident on the skin of the shin perhaps one-third of the way up; but the gangrenous process was already established, and my belief is that it was proceeding up the limb; and the question which presented itself to me was not whether we could save the whole of the leg, but any portion of it below the knee, and the effort to accomplish this determined the first exploratory incision. I was satisfied that with the circulation in the condition which we found it; with a large clot present in the soft tissues; with the decomposition which was sure to occur; with the gangrene already established and sepsis already present, that we should have the gangrene extending rapidly unless that wound was cleaned out. In other words, this patient would have died if we had not amputated the leg, unless we could restore the circulation more perfectly than it was at that time, or more perfectly than nature could have reëstablished it under the circumstances. I hesitate to make a suggestion enlarging the field of operative surgery. It has extended so rapidly, has involved so many new questions, that even the oldest heads are puzzled to know where to stop and what to do, and it was only after considering the danger which would follow the conservative method of temporizing with such an injury, and thinking of the fatal results which have followed in the past, that I was led to adopt this method of direct and immediate interference, and I believe it to be a conservative plan, because, although primary hæmorrhage was arrested here, the very conditions that we found showed that the hæmorrhage would have recurred if the man had survived the gangrene. The point that I endeavored to make plain, I believe is a good one, to-wit: that the gangrene is much more likely to supervene when we have an injury to the artery with such a tense condition of tissues as we had here, with the artery compressed, the venous circulation disturbed, because of the pressure and with the sheath of the artery, which supplies the blood, which gives nourishment to the coats of the vessels detached, than if we open up and cleanse the part, free it from this pressure, ligate the artery and vein if necessary, and put the part in a condition to develop the collateral circulation. If you will take the five hundred or more cases of fracture reported by Dr. Dennis a year ago, and the cases that have come under the observation of other men who practice surgery to-day, and see the good results that follow the practice of aseptic surgery in the treatment of compound fractures, you will readily conceive and concede that it is conservative surgery to ligate the artery and make the simple fracture compound. If there is anything that brings to the surgeon an uneasy pillow, it is watching these cases of injury of the arteries and temporizing with them, depending upon pressure; waiting for secondary hæmorrhage to come to demand the interference that he ought to have made at first.

THE GOVERNOR OF BUENOS AYRES has authorized Mr. Neild to practice preventive vaccination for charbon, by the Pasteur method.

DOMESTIC CORRESPONDENCE

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Late Hereditary Syphilis—Commencement of the University Medical School; of Bellevue Hospital Medical College—The New York Quarantine Station—Salary of the Health Officer.

At the last meeting of the Academy of Medicine in March, Dr. Frederick R. Sturgis read a paper on "Some Questions in Connection with Syphilis Hereditaria Tarda," at the conclusion of which he expressed the opinion that late lesions never appear in hereditary syphilis, any more than in the acquired disease, without being preceded by earlier and minor syphilitic symptoms. In the discussion which followed the paper, while most of the speakers referred to cases in which no record or trace of this early history could be found, there seemed to be a unanimous concurrence in this view.

The subject, Dr. Sturgis said, was one of special interest to the general practitioner as well as the syphilographer, on account of its relations to the etiology of many cases met with. It had formerly been involved in much obscurity, and although great advances had been made during the last twenty years, many points still remained unelucidated. The question was still asked, Can hereditary syphilis remain latent for years? Until recently this was supposed to be a fact in certain exceptional cases of acquired syphilis; but the weight of evidence now showed beyond question that such a thing never occurred in the latter. It was the generally accepted opinion at the present day that, in cases apparently of this kind, other and lighter manifestations of syphilis invariably preceded the so-called tertiary symptoms. There was always an initial lesion, although no trace of it might afterwards remain.

It was at one time supposed that in all cases of hereditary syphilis the disease showed itself at birth, but the fact was now recognized that many cases occurred in which the child was apparently perfectly healthy when born. Statistics showed, however, that in a large proportion of cases syphilitic lesions made their appearance before the end of the third month. Of 249 cases collected by Diday and other authorities, the disease showed itself in 118 by the end of the first month, in 117 between this time and the end of the third month, and in 14 later than the third month. Of Diday's own cases, in two the lesions did not appear until after the first year. In instances in which the disease first showed itself at a very late period the question of acquired syphilis always had to be taken into consideration.

The usual history of inherited syphilis, exclusive of those cases in which the child was born syphilitic, was that after a few weeks or months the earlier manifestations of the disease made their appearance, such as a macular eruption or mucous patches of the mouth and tongue. At this early stage there was usually no eye or ear lesion, or affection of the bones or joints. These lesions soon passed away, and there

might be no further syphilitic trouble for years, or until the age of puberty was reached; when there might develop keratitis, otitis, disease of the bones or joints, or deep ulcerations in the buccal or nasal cavities. Unless the early history of the patient could be accurately learned, it might be supposed that these late manifestations constituted the first appearance of the disease, as in an interesting case occurring in a man of 30, related by Fournier, in which the missing links in the history were supplied by the patient's family physician. Even the diagnostic sign of Hutchinson's teeth was often absent in these cases.

In the discussion on the paper Dr. Edward L. Keyes said that he could state with positiveness that it had not been his experience to see any cases of what could be properly called late hereditary syphilis. He had, indeed, met with alleged cases of this character, but in all of them he was able to detect some scar or deformity which convinced him that the late lesions present were not the first manifestations of syphilis in the patient. He had followed up a number of individuals who were known to have had hereditary syphilis, and found that, after various periods of latency, the disease sometimes broke out again before the age of 21. Before they reached the age of 25, however, when crystallization of the system had taken place, the trouble had been pretty well gotten through with; and he did not recall a single instance in which a new symptom of hereditary syphilis had appeared after this latter age. The character of the disease in any particular case was also largely a matter of soil; so that he did not believe in a virulent or a benign type of syphilis *per se*, the seriousness of the symptoms depending to a great extent on the constitutional characteristics of the subject. In this connection he referred to three brothers, all of whom had syphilis at different times, and in all of whom it produced grave lesions of the central nervous system, which in one of them proved fatal; yet the third of the brothers gave the disease to a young woman who had it in an extremely light form. Incidentally Dr. Keyes spoke of a method of treatment in congenital syphilis which he had worked out some years ago at the New York Foundling Asylum, and which he had always found very satisfactory. This consisted in the administration of the $\frac{1}{100}$ part of a grain of bichloride of mercury every hour or, if that was not practicable, of the $\frac{1}{50}$ of a grain every two hours, night and day; the medicine being given in water or in the child's food. Later, the intervals between the doses could be extended to four hours or more. He had never known this course of treatment to produce mercurialization and, in fact, it had often seemed to have a salutary effect upon the diarrhœa from which the infants at the Foundling Asylum were so apt to suffer.

Dr. P. A. Morrow said that he could see no reason why hereditary syphilis should not continue through a lifetime, just as the acquired disease was often known to do. It was essentially the same affection. So far as his experience went, there was absolutely no history of the early manifestations of the disease in many cases; but this was, of course, merely negative evidence, and it was contrary to his general knowledge of the disease to suppose that in any instance the patient had really escaped these earlier manifestations.

Dr. Roland W. Taylor said that it was his firm conviction that there were always some manifestations in early infancy, though these might be so ephemeral or so unaccompanied by destructive action that they left no permanent trace. We might expect the later lesions to appear at almost any time up to about the twenty-first year. In the section on inherited syphilis in Bumstead and Taylor's work, he said, he had placed the usual limit at 12 years (although, as was well known, manifestations of hereditary syphilis occasionally showed themselves at a considerably later period), for the reason that he found that other affections would be likely to be confounded with inherited syphilis, which was so comparatively rare at these later ages. Dr. Taylor said that in his work published in 1876 he was the first American to call attention to the bone lesions of syphilis, and to bring them out of the slough of so-called scrofula. All the way up to the age of puberty we might expect the later manifestations. When we got beyond the twenty-first year it was pretty hard to say whether one was dealing with syphilis or not. As a rule, the activity of the lesions occurred before the tenth or twelfth year.

Dr. L. Bolton Bangs said that he was in accord with the other speakers in regard to the question at issue, and his own observation had been that almost invariably, by careful inquiry and investigation, he had been able to find some history of previous symptoms.

Dr. Chapin said that he agreed with Dr. Keyes as to the importance of the kind of soil into which the syphilitic infection was introduced, and said that he had known of many syphilitic infants with snuffles and mucous patches who were fat and robust, and really seemed to thrive on the disease. As to the later lesions occurring in individuals beyond the age of 10 or 12 years, he thought they might as well be called scrofula as syphilis. If there were no typical lesions of syphilis present, it was his practice to put patient on cod-liver oil and other tonic treatment, as he was unable to decide whether the trouble was really syphilitic or not.

Dr. L. Emmett Holt said that it seemed to him to be the easiest thing in the world that the earlier manifestations of hereditary syphilis should be overlooked. In the course of his remarks he called attention to the importance, as a diagnostic sign of the disease, of enlargement of the epitrochlear glands, and said that although this condition might be due to other causes, in his experience very few cases of syphilis occurred without such enlargement.

Dr. A. Jacobi said that when syphilis occurred at birth it was not always easy to recognize positively. There was sometimes great difficulty in distinguishing between a syphilitic and a rachitical bone, or rather cartilage, and particularly when the ribs were affected. If the difficulty, then, was great at this early period, it was still greater later on. It was a fact that where a number of children were born in a

syphilitic family the manifestations were apt to become less and less marked in each successive child, and the disease might at last be indistinguishable from so called rachitis or so-called scrofula.

In closing the discussion Dr. Sturgis said that what he meant by the late lesions of hereditary syphilis was those occurring after the age of 5 years, and he believed that such late manifestations did not occur without previous symptoms. The children in which these late lesions were found were apt to be born apparently healthy, and when the earlier manifestations did occur, they might escape notice and remain untreated. It was in the untreated cases that the later lesions were most liable to make their appearance. At the age of 5 or 6 years they were apt to have punctate interstitial keratitis and disease of the ears, joints, etc., and nothing would be found to do any good until the iodide of potassium was resorted to. Under this treatment the child would probably get well rapidly. At 10 there was likely to be another outbreak of trouble, and about the age of puberty the most serious explosion usually occurred. After the age of 25 the disease would generally be found to be acquired. If a patient over this age presented himself with the earlier symptoms of syphilis we could almost universally suspect that the disease was acquired, since the early manifestations of the inherited disease were most likely to show themselves within three months from birth, and always did so within the first year.

At the Commencement of the University Medical School, which occurred at the Metropolitan Opera House March 6, there were 164 graduates, and at that of Bellevue Hospital Medical College, which occurred at the Carnegie Laboratory March 12, the day of the great blizzard, 144 graduates.

The bill placing the New York Quarantine Station on a more business-like basis by reducing the salary of the Health Officer to $10,000, cutting down the fees, etc., which was introduced into the State Senate in January, has now passed both branches of the Legislature. P. B. P.

LETTER FROM BOSTON.

(FROM OUR OWN CORRESPONDENT.)

The Surgical Use of Hebra's Continual Bath or Water-bed—Laparotomy for Tubercular Peritonitis—Treatment of Fractures of the External Condyle of the Humerus—A New Method for the Removal of Powder Grains from the Face.

At the meeting of the Surgical Section of the Suffolk District Medical Society, on March 7th, Dr. Otis K. Newell read a paper on "The Surgical Use of Hebra's Continual Bath or Water-bed," of which he had had personal observation. In addition to its use in the treatment of eczema and other cutaneous diseases, the continual bath has been used with success in the treatment of gangrene, bedsores, etc., and more especially severe burns, where its beneficial effects are particularly noticeable. Patients are sometimes kept in the water for a very long time. One patient was in the bath 385 days. They are removed only for evacuation of the bowels and bladder and they take their meals and sleep when in the water. The danger of drowning is much less than seems apparent at first thought. If a patient is very weak the precaution may be taken to support him by a bandage passing around the body under the arms, which is secured at the head of the bath to prevent his slipping down the inclined portion that raises the head out of water. Only the palms and soles suffer and these only during the first few days. They become shriveled and folded like a washerwoman's hands and the condition is much alleviated by applications of substances of a greasy nature. A papular eruption occurs on the parts which are both in and out of the water, as the arms and thorax. This, however, heals spontaneously. Hebra's beds contain 675 litres of water. When a patient first enters the bath the temperature of the water is 30° C. (86°F.), which seems warm to him. The heat is gradually raised to 35° or 37° C. (95° or 98.6° F.), which is kept constant by a simple arrangement by means of a kerosene lamp.

Dr. A. T. Cabot read a paper on "Laparotomy for Tubercular Peritonitis," reporting a case in which he had operated on a girl 16 years of age. She had been previously tapped and 3 pints and 6 ounces of ascitic fluid withdrawn. In operating he made an incision in the median line between the umbilicus and the pubes. He found a localized encysted peritonitis containing ascitic fluid and the walls did not collapse on removal of the fluid. The peritoneum was so studded with miliary tubercles that it gave a feeling as if the finger had been thrust among small lead shot. A drainage tube was inserted and there was gradual recovery. He also reported a case of general tuberculous peritonitis in a girl 3 years old for which he had operated with good results and the patient was shown. In this case the wound was at once closed, and Dr. C. prefers this method to drainage. This treatment for tuberculous peritonitis was accidentally discovered by Sir Spencer Welles over 20 years ago when he was operating for something else, and this patient is now alive. Hirschfield has reported an autopsy where no tubercles could be found although they had existed previous to the operation. Dr. Cabot suggested as cause of the disappearance of the tubercles, adhesions between the walls of the collapsed sac after the removal of the fluid and the encysting of the tubercles by connective tissue cells.

Dr. Elliot reported a case of successful operation for general tuberculous peritonitis in a girl 16 years old, and Dr. John Homans reported two cases of laparotomy and one by tapping for tuberculous peritonitis.

Dr. G. W. Gay has treated external condyle of the humerus with the right angle splint. He has seen follow dislocation of the radius forward, and also of both radius and ulva outward and backward. To prevent the first dislocation he likes the acute angle splint and he also thinks side splints useful.

Dr. S. J. Mixter showed a new device for the removal of powder grains from the face. It consists of small steel tubes of different sizes. These are

similar to trocar tubes and are partially sharpened. One of proper size is selected and placed on the skin over the site of the powder grain and then it is pressed down so that on removal the skin together with the powder grain is elevated above the surrounding skin. It can then be snipped off with a pair of fine curved scissors and a suture of fine black skin allows the wound to heal by first intention without leaving any scar. S. N. N.

CINCINNATTI LETTER.

[FROM OUR OWN CORRESPONDENT.]

The Association Meeting in May—More Positions for Internes in the Cincinnati Hospital—The Hospital; the Staff—Coalescence of Medical Societies—Fire in the Cincinnati Hospital—Medical College Commencements.

The absorbing topic in medical circles here is the meeting of the American Medical Association in our city in May of this year. We confidently prophecy a very successful meeting, at least so far as the efforts of the local men are concerned. It has been twenty years since we were honored by having the Association meet here, and we therefore wish to make the session a grand success. The various committees are busily engaged pushing forward the work allotted to them. Music Hall and the adjoining rooms have been secured for the meetings. This building is admirably fitted for the general meeting, and also for the meetings of the various Sections.

There will be a banquet tendered the members at our magnificent new Art Museum, at which place the delights of the stomach may be readily combined with those works of art that are so delightful to the eye. Thus we may be enabled to obtain a feast of vision and a flow of gastric juice. The following evening will be devoted to a concert given by the Apollo Club, at Music Hall. We can guarantee a hearty and cordial welcome to all, and trust that we may be honored by an unusually large attendance.

The hospital authorities have increased the chances for men to obtain hospital training, by appointing seven externes in addition to the internes already on duty. The applicants for the positions are subjected to a competitive examination. The seven presenting the best papers in all branches are chosen to fill the positions. These examinations are strictly impartial, the Staff not knowing whose paper they examine nor in whose favor they vote. The externes are chosen about the first of October each year, becoming internes upon the 10th of the following April. Thus during the winter months there are fifteen men on duty; seven internes, one senior interne, and seven externes. The new system of appointing externes was inaugurated last Fall, and must still be considered in the nature of an experiment.

The City Hospital is a public institution, capable of holding about 400 patients. The government is vested in a Board of Trustees appointed by the Governor of the State and by the Superior Court. Politics have never had any influence in the distribution of positions, either medical or executive; consequently the institution has always been well conducted and prosperous.

The Medical Staff of the Hospital consists of four surgeons, four medical men, four obstretricians, two oculists, two pathologists, and four curators and microscopists. The last named are not official positions. The Staff changes every four months; half of the men being on duty at all times. Such men as the following constitute the Staff: Drs. N. P. Dandridge, P. S. Conner, E. W. Walker, Jos. Ransohoff, surgeons; Drs. J. A. Murphy, F. Farcheheimer, J. C. Mackenzie and Wm. Carson, are the medical staff. The obstetricians are Drs. W. H. Taylor, Thad. Reamy, C. D. Palmer, and G. M. Allen. The oculists are Drs. Jos. Aub and Rob't Sattler. Pathologists, Drs. Kebler and Eichberg. Drs. Marsh, Cameron, Holmes and Caldwell occupy positions as curators.

Several years ago an agitation arose that resulted in a division in the Academy of Medicine and a new Society was organized. The consequence of the division was that the medical profession of our city has been seriously hampered and crippled by a lack of unity. There has been no assembly that authoritatively represented the opinions of the medical profession as a whole. Two comparatively weak Societies have been holding forth in place of one large, powerful and united brotherhood. Happily, the schism is about at an end. The propriety and feasibility of the amalgamation of the two Societies has been freely discussed, and the general tenor of opinion is decidedly in favor of an early coalescence. The advantages that will arise from such a course are very obvious. We shall be a united, harmonious and truly powerful association; we can speedily obtain a permanent home for ourselves; we can be influential in securing legislation for the good of the public and for our own advancement; and better work can be done.

There has been quite a serious conflagration at the Cincinnati Hospital. The fire originated in a very peculiar manner, but one that it would be well to detail, as other institutions may have similar death-traps for their patients. An elevator formerly run up through a shaft at the south end of the burned pavilion; after the elevator was removed the shaft was divided into compartments through which the dirty clothes, dust, etc., were carried to the basement. Just alongside of this chute, in the first story of the building, was a gas-stove. There had been a leak in the gas-pipe and the gas escaped up this chute to the ventilating space between the ceiling and the roof. A match was applied to the gas-stove, with the effect of igniting the gas which had accumulated in the shaft; an explosion followed, setting fire to the woodwork and largely destroying the entire third floor of the pavilion. The patients all escaped without injury, but their safety was largely due to the efforts of Dr. H. T. Gaylord, an interne, and Mr. Julius Eichberg, the apothecary of the institution. Others deserve great credit for their efforts in rescuing the badly frightened patients, but the above named were on hand at the time of the explosion and therefore had a better opportunity for distinction.

The burned pavilion is the only one that is not

possessed of exits at both ends. As the fire originated near the staircase, the patients were somewhat panic-stricken. The damage to the institution will be immediately repaired, and the previous defects in architecture will be remedied. Five thousand dollars will about cover the amount of damage done.

The medical colleges have had their commencement exercises. An interesting feature of the graduation exercises of the Ohio College was an address delivered by Dr. J. S. Billings, of Washington, D. C., on "A History of the Ohio Medical College before the War." It was a very interesting and pleasant talk, quite out of the line of the ordinary set speeches we are so apt to have inflicted upon us at Commencements. He spoke in eloquent terms of Drs. Graham and Blackman, recently deceased.

J. C. O.

ENORMOUS ENLARGEMENT OF THE HEAD.

Dear Sir:—The following case may be of interest to the readers of THE JOURNAL:

Isham Harris, colored, æt. 17. Has been under my observation for 5 years. At the age of 3 months he had an eruption of the scalp lasting 6 months, during which the occiput, parietal and occipito-frontalis bones began to enlarge and have gained the enormous size of 33 inches above the ears, 17½ inches each side right and left from chin to top of head. He is of average intelligence, sews, knits and crochets, has the physical development and face of a 5 years' old child, has not walked any in 7 years, previously having walked on crutches and getting a fall has since refused to make the attempt. His general health is good and has been from infancy. Has slight headache and dizziness when his liver is torpid, otherwise never complains of weight, pain or any unnatural feeling about the head, and weighs 85 pounds. I made a fruitless attempt to get his photograph to present at the International Medical Congress, and have not succeeded at this writing, his mother refusing, stating that she is afraid someone will kidnap him for public exhibition.

R. H. JENKINS, M.D.

Hogansville, Ga.

NATIONAL CONTROL OF QUARANTINE.

Dear Sir:—The editorial in your issue of the 24th inst. entitled "The Bill (H. R. 1526) to Prevent the Introduction of Contagious and Infectious Diseases and to Establish a Bureau of Health," causes me to understand that you have the impression that this is a bill which was introduced through the agency of the committee of the College of Physicians of Philadelphia. I write this, as a member of that committee, for the purpose of removing that impression. The bill you speak of is doubtless one which has been proposed and introduced in accordance with the action of the American Public Health Association, at their last meeting, in advocacy of the establishment of a National Bureau of Health, and the Philadelphia committee have had no connection with it in any way. The report and the recommendation of our committee were strictly limited to the question of the necessity of *National Control of the Maritime Quarantine*, and the bill embodying the suggestions made in our address to the medical societies of the country has not yet been introduced. May I request that you publish this letter, in order to correct a similar impression which may have been received by others? Very respectfully,

E. O. SHAKESPEARE.

1336 Spruce St., Philadelphia, March 26, 1888.

A CASE OF POST-PARTUM PUERPERAL CONVULSIONS.

Dear Sir:—On February 22, 1888, I was called by her husband to see Mrs. B., æt. 24, multipara, whom I found in labor. The labor had advanced to the second stage, and she was delivered in about thirty minutes after my arrival of a well-developed male fœtus. The labor was normal in every respect, and there was no hæmorrhage nor laceration of cervix or perineum. She had been in good health prior to labor, with the exception of the last three days, during which she had suffered from a very severe throbbing headache. After delivery this headache continued, and about thirty minutes after delivery was completed she suddenly passed into general convulsions. In the course of an hour and a half she had seven very severe convulsive attacks. I sent for counsel at once, which, however, did not reach me until after the convulsions had ceased. Immediately after the first attack passed off I injected hypodermically ½ gr. morphia with $\frac{1}{60}$ gr. atropia, which producing no visible effect, in thirty minutes I injected ⅜ gr. morphia with $\frac{3}{200}$ gr. atropia, and bled her from the arm to about 12 ozs. After the second injection and the venesection the convulsions were less violent and the intervals longer, but as they had not ceased one hour after the second injection of morphia and atropia, I made an injection of ¼ gr. morphia alone. In a few minutes the convulsions ceased and did not recur. The patient remained in an unconscious state about nine hours after the last convulsion, when she gradually regained consciousness, and has made a good recovery.

The patient is a stout, plethoric woman, and before the venesection the pulse was full, hard and bounding.

C. J. MARCH, M.D.

Whelan Springs, Ark., March 8, 1888.

NECROLOGY.

A. B. STUART, M.D.

Dr. A. B. Stuart died at Santa Rosa, California, on July 30, 1887, aged 57 years.

Dr. Stuart was born at Williamsburg, Pa., on August 27, 1830. He was educated at Lewisburg University, Pa., and entered upon the study of medicine at Berkshire Medical College, Pittsfield, Mass., from which institution he was graduated M.D. in November, 1856. Previous to his graduation he

filled the position of demonstrator of anatomy in that college.

He located in practice in Westhampton, Mass., but in 1858 removed to Macomb, Ill., where he engaged in the duties of his profession until August, 1861, when he entered the army as assistant-surgeon of the 10th regiment Missouri infantry volunteers. In the autumn of 1861, while assisting in the hasty construction of a fort, he was caught between some timbers and sustained an injury producing partial paralysis, from which he never fully recovered. He was on duty with his regiment during the seige of Corinth and the spring campaign of 1862, but owing to severe illness he was sent North in July, 1862. In the month of September he returned to his command and was present at the battles of Iuka and Corinth in September and October of that year. After those battles the Confederate wounded, numbering over 3000, were placed in hospital at Iuka, Miss., under the immediate care of their own surgeons, and Dr. Stuart was put in charge of the whole, by direction of General Rosecrans. He filled the position of medical superintendent of the Iuka hospital until March, 1863, when arrangements were made for the care of the inmates elsewhere.

In April, 1863, he was commissioned Surgeon of the 1st regiment Alabama cavalry volunteers, U. S. (white), and continued in active service with that regiment until January, 1864, when, owing to continued ill health, he resigned his commission, returned North, and some months later resumed practice in Macomb, Ill. In the winter of 1865–6 he attended the regular session of the Bellevue Hospital Medical College, New York, receiving an adenudum degree in March, 1866, from that college.

In June, 1866, he removed to Minnesota, established an office in Winona, and engaged in general practice until July 1, 1876, when he determined to seek a climate better adapted to his impaired health. With this end in view he visited California, and for some years was located at Santa Barbara. In 1880 he removed to Santa Rosa, in that State, which point he selected as a permanent residence. He soon acquired a lucrative practice in his new field, to which he gave his attention to the last day of his life.

During the spring and early summer of 1887 he suffered from occasional seizures of partial paralysis, the effects of which, to some extent, disappeared. On the 30th day of July, 1887, he was stricken with a severe attack of paralysis, from which he never rallied, death occurring on the evening of that day.

Dr. Stuart aided in the formation of the Winona County Medical Society in 1869, and was President of the same in 1872. He was a member of the Massachusetts Medical Society, of the Minnesota State Medical Society from its organization—holding the position of vice-president in 1874 and 1876—of the California Medical Society, and of the American Association, serving, in 1873, as secretary of the section on State Medicine and Hygiene. He served as a delegate from Minnesota to the International Medical Congress which met in Philadelphia in 1876. He was largely instrumental in securing the establishment of the Minnesota State Board of Health, and was elected president of that body at its first meeting in 1872.

Dr. Stuart, notwithstanding a feeble physical constitution and the vicissitudes attendant upon almost constant ill health, succeeded in accomplishing a large work in his professional career, solely by the aid of that earnest effort and indomitable energy which were manifested in all his undertakings. The later years of his life were saddened by the great affliction arising from the loss of his children. His last bereavement, the death of his daughter Mary, a lovely child of 12 years, which occured in 1883, was to him a sorrow unrelieved by the lapse of time.

Of his immediate family his widow alone remains, but near the scenes of his childhood an aged father mourns the loss of a most devoted son. * * *

MISCELLANEOUS.

INSTRUCTIONS TO THE MEMBERS OF THE ILLINOIS STATE MEDICAL SOCIETY.—*Dear Doctor:* Through the courtesy of the different Railway Passenger Associations all persons attending the Thirty-Eighth Annual Meeting of the Illinois State Medical Society to be held at Rock Island, Ills., commencing Tuesday, May 15, 1888, will be granted a reduction of a fare and one-third for the round trip, only under the following conditions:

First. Each person must purchase (not more than three days prior to the date of the meeting), a first-class ticket (either unlimited or limited) to the place of meeting, for which he will pay the regular tariff fare, and upon request the ticket agent will issue to him a certificate of such purchase properly filled up and signed by said ticket agent.

Second. If through tickets cannot be procured at the starting point, the person will purchase to the most convenient point where such through tickets can be obtained, and there purchase through to the place of meeting, requesting a certificate properly filled out by the agent at the point where purchase is made.

Third. Tickets for the return journey will be sold by the ticket agents at the place of meeting, at one-third the highest limited fare, only to those holding certificates signed by the ticket agent at point where through ticket to the place of meeting was purchased, and countersigned by the secretary or clerk of the convention, certifying that the holder has been in attendance upon the convention.

Fourth. It is absolutely necessary that a certificate be procured, as it indicates that full fare has been paid for the going journey, and that the person is therefore entitled to the excursion fare returning. It will also determine the route via which the ticket for the return journey should be sold, and *without it no reduction will be made*, as the rule of the association is that "No refund of fare will be made, on any account whatever, because of failure of the parties to obtain certificates."

Fifth. Tickets for return journey will be furnished only on certificates procured not more than *three days* before the meeting assembles, and will be available for continuous passage only; no stop-over privileges being allowed on tickets sold at less than full fares. Certificates will not be honored unless presented within three days after the date of adjournment of the convention.

Sixth. Ticket agents will be instructed that excursion fares will not be available unless the holders of certificates are properly identified, as above described by the secretary or clerk, on the certificate, which identification includes the statement that one hundred or more persons, who have purchased full fare tickets for the going passage, and hold properly receipted certificates, have been in attendance at the meeting.

The certificates are not transferable, and the signature affixed at the starting point, compared with the signature to the receipt, will enable the ticket agent to detect any attempted transfer.

N. B.—Please read carefully the above instructions, be par-

ticular to have the certificates properly filled and certified by the railroad agent from whom you purchase your going ticket to the place of meeting, as the reduction on return will apply only to the point at which such through ticket was purchased.

Yours truly, G. L. EYSTER, M.D.
Assistant Secretary.

Rock Island, Ill., March 20, 1888.

SUCCESSFUL DISPOSAL OF GARBAGE AT MILWAUKEE.—Martin, Commissioner of Health, for Milwaukee, writes to the *Sanitary News* of March 10, 1888, reporting the success of the disposal of garbage by cremation, as follows:

Perhaps Milwaukee is not so favorably situated as some of our sister cities for the safe disposal of our refuse material, and that may be one reason why we have been forced to take vigorous measures to consume ours. Other municipalities have entered on a course of experiments involving large sums of money, and will, at the end of these experiments, be no nearer the solution of the problem than when they were first undertaken. With us it is quite different. Last summer we found that fully one-half of our garbage was water that could be, and was, extracted by a powerful press, and as we know of no better or cheaper method of getting rid of this water, than by evaporation, and as we do not expect that garbage like ours will burn without fuel, so our furnace was erected, and every day, for more than five months, our garbage has been consumed to a dry, inodorous ash; with us, it is no longer an experiment, but an accomplished fact, that we claim to be the first city that is to-day destroying her refuse material by fire. A test of the cost of consuming the garbage was made on December 27, with the following result: The amount received and consumed was 40,215 pounds, and the fuel required was 5,020 pounds, being 4.3 cents per hundred pounds of garbage consumed, a result highly gratifying when we consider that on that date there was a large quantity of snow and ice mixed with the garbage. This department entered into an agreement for three years with the contractor to burn all garbage delivered at the furnace by order of this office, being that collected by men employed for that work. The wholesale houses, grocers, commission houses, and others of that class, take their refuse to the same place. The contractor is also required to burn all small dead animals, and the furnace is in actual operation during this season, the worst of the whole year, only from eight to ten hours daily.

ANNALES DE LABORATOIRE DE L'HOSPICE DES QUINZE-VINGTS is the name of a new and important periodical for ophthalmologists and pathologists, edited by Drs. Fienzal and Haensell, and published by Delahage and Lecrosnier, of Paris. The editors will issue a series of studies of the pathological material in the Hospice Quinze-Vingt, which includes 1,700 enucleated bulbs.

THERAPEUTICS WITHOUT ALCOHOL.—The Temperance Hospital has been in existence now about twelve years, and the annual report for 1886-7 may be studied with advantage in order to compare the results with those of other hospitals. It must not be supposed that the hospital only receives abstainers, though these are in the majority, probably due to the large proportion of infants and children. In the surgical department the results have been very satisfactory, so far as one is enabled to judge from mere figures, but turning to the medical cases, we may restrict examination to one or two groups of disease with advantage. Out of the thirteen cases of acute pneumonia four (abstainers) died, one of them on the fifty-fourth day from exhaustion. Only four cases of typhoid fever were admitted in all, and although the cases were of young people—15, 7, 14 and 35, respectively—and comprised three abstainers, they all proved fatal. The treatment was the same as elsewhere, and the only difference consisted in the non-exhibition of alcohol. Then again, simple exhaustion, eighty-seven days after the onset of the disease, proved fatal in one instance. The average stay of patients in the hospital would seem to show that convalescence is unduly prolonged, and this notwithstanding the fact that the list of cases comprises several of "nasal catarrh" and other trivial complaints. The only occasion on which alcohol was administered was in a case of operation for strangulated hernia, in which death resulted from an unreduced constriction. Every credit is due to the registrar, Mr. Leopold Hudson, for the clear and practical manner in which he has tabulated and arranged his figures. We shall look forward with interest to future reports drawn upon the same excellent plan, as it is only by comparing results that medical men will be enabled to judge the merits of treatment without alcohol. Thanks to the impartial summary with which the report opens, it is easy to grasp its general tenor. It constitutes an innovation which other hospitals would do well to copy.—*British Medical Journal*, March 10, 1888.

ANATOMICAL SCIENCE IN THE DISTRICT OF COLUMBIA.—On Monday, March 26, House Bill No. 5040, for the promotion of anatomical science and to prevent the desecration of graves in the District of Columbia, came up for discussion in the House of Representatives. While the discussion on the Bill and amendments to it cover ten pages of the *Congressional Record*, there is nothing remarkable, in one way or the other, about the Bill. It is simply one providing that the unclaimed dead in public institutions, and the bodies of such persons as, unclaimed, did not request burial, should be turned over to the medical colleges of the District of Columbia for dissection, and providing for the punishment of body-snatching. The Bill and the objections made to it by members of the House will be considered next week.

ROLL OF PERMANENT MEMBERS.—Dr. D. W. Harrington, of Buffalo, N. Y., became a member of the American Medical Association in 1887. Dr. J. H. Quinn, Blue Springs, Neb., became a member in 1886. These names were accidentally omitted from the triennial list of members as published in THE JOURNAL of December 31, 1887.

THE WEST VIRGINIA STATE MEDICAL SOCIETY will hold its twenty-first annual session at Huntingdon, W. Va., on May 16, 17 and 18, 1888. A full meeting is expected. For further information apply to J. L. Fullerton, M.D., Secretary, Charleston, W. Va.

LA SEMANA MEDICA is the title of a new journal published in Havanna on the 7, 14, 21, and 28 of each month, and edited by Dr. T. García.

DONA DR. MATILDE MONTOYA is the first woman to receive the degree of M.D. in the Mexican Republic.

DR. GARRE, of Basle, has been appointed Professor at Türbingen.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U. S. ARMY, FROM MARCH 17, 1888, TO MARCH 23, 1888

Col. J. H. Baxter, Chief Medical Purveyor, will proceed to Augusta Arsenal, Ga., on public business. S. O. 62, A. G. O., March 16, 1888.

Major Chas. R. Greenleaf, Surgeon, will proceed to Cambridge, Mass., on official business. S. O. 62, A. G. O., March 16, 1888.

Major W. H. Forwood, Surgeon, granted one month's leave. S. O. 20, Dept. Dak., March 10, 1888.

Major H. E. Brown, Surgeon, assigned to temporary duty at Ft. Barrancas, Fla., during the absence on leave of Asst. Surgeon M. C. Wyeth. On the return to duty of Capt. Wyeth, Major Brown will rejoin his proper station. S. O. 65, A. G. O., March 20, 1888.

Major R. M. O'Reilly, Surgeon, will proceed to York, Pa., and make an examination of Capt. Edw. B. Rhum, Twenty-first Inf. S. O. 62, A. G. O., March 16, 1888.

Capt. J. C. Worthington, Asst. Surgeon, granted leave of absence for four months, to take effect May 15, or as soon thereafter as his services can be spared. S. O. 65, A. G. O., March 20, 1888.

Capt. M. C. Wyeth, Asst. Surgeon, granted leave of absence for two months, to take effect about April 1. S. O. 65, A. G. O., March 20, 1888.

First Lieut. Wm. D. Crosby, Asst. Surgeon, granted leave of absence for two months, with permission to apply for an extension of one month, to take effect after being ordered to a new station. S. O. 60, A. G. O., March 14, 1888.